

Serial Communications Protocol Definition

Project: SDP-5

Updated: April 1, 2003

Software Version 1.0

Protocol Version:

Major rev 1

Minor rev 4

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JBL Part No. 070-15332 Rev 0

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1 Documents

The following documents should also be used with this document to understand how this protocol can be used with an SDP-5.

1.1 Change List

2 Definitions

User Parameter:	A user changeable variable that stores a specific value that describes an operating condition for the SDP-5 system.
HOST:	The device initiating or receiving the serial communication packets to/from the SDP-5.
SDP-5:	The JBL product receiving or transmitting the serial communication packets to/from the HOST.
Nonvolatile RAM:	The area of memory in an SDP-5 that stores users adjustable parameters. The Nonvolatile RAM is battery backed, to maintain values during SDP-5 power down.

2.1 Protocol Version Cross-reference

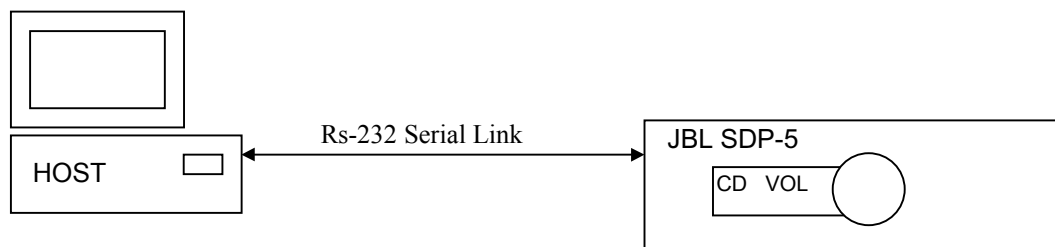
All references to SDP-5 shall be valid for both the MC-8 and SDP-5 products unless specifically documented otherwise. All references to SDP-3 shall be valid for the MC-1, DC-2 and SDP-3 products unless specifically documented otherwise.

3 Abbreviations

SOP	Start of Packet
EOP	End of Packet
ACK	Acknowledge
NAK	No Acknowledge
FPD	Front Panel Display

4 General Description

The intention of the SDP-5 serial port and protocol communication is for an external connected HOST to control and obtain status from the SDP-5. The protocol has been designed to focus on two specific goals. The first is HOST uploading and downloading of SDP-5 configuration, and system/effect setups. The second is HOST control of basic user adjustable parameters.(i.e. input, volume, balance...)



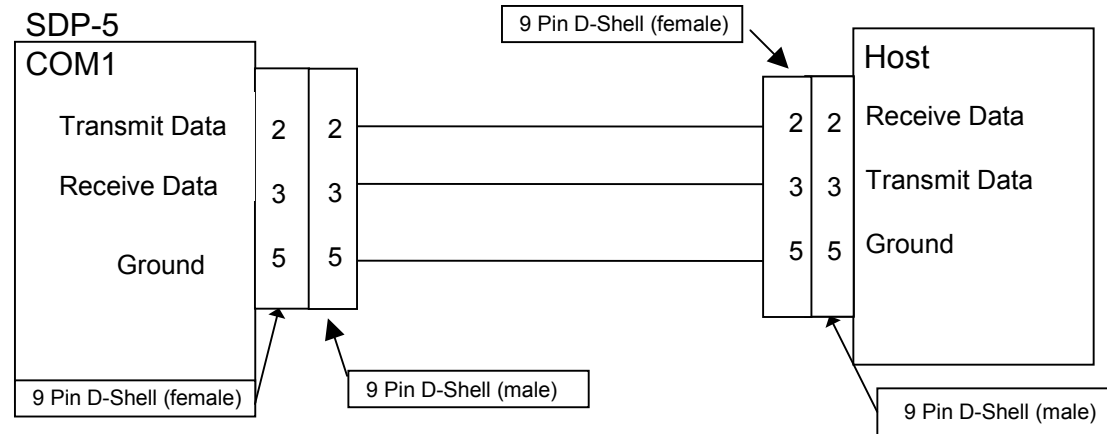
The SDP-5 uses simple notification, command, response and acknowledgment packets to have communication transactions with a given HOST. This protocol is designed for point to point communication between a HOST and SDP-5. The SDP-5 Protocol is a 3 layered system. The SDP-5 serial protocol allows for the SDP-5, or the HOST, to initiate a communication transaction. Most transactions are initiated by the HOST. SDP-5 then responds to the HOST command with either a response or acknowledgment packet. There are a few asynchronous notifications that SDP-5 initiates indicating system changes. Each transaction initiated must wait for a corresponding response before initiating the next transmission.

The 3 protocol layers are: Physical, Data Link, and Application Layers.

The SDP-5 Serial Protocol attempts to be as backward compatible with the SDP-3 as possible. The basic structure of the protocol has not changed.

4.1 Physical Layer

DB-9 RS232 Connector



Note: The wiring requirements for a 9 pin to 9 pin serial connection, are a male to female straight through cable.

4.2 Serial Port Driver

SDP-5 serial port has been setup to operate as follows:

Operating Mode:	Full Duplex
Baud rate:	19.2K baud
Data Size:	8 bits (1 byte)
Parity:	Odd
Stop Bits:	1
Hardware Handshaking:	None

4.3 Errors

The SDP-5 will detect parity, framing and data overrun errors. If any of the physical layer errors are detected, the complete packet is corrupted and the SDP-5 will reset the transaction and begin to look for a start of packet byte.

4.4 SDP-5 Receive Buffer

The SDP-5 has an internal receive buffer. The buffer is 256 Bytes and will transmit a NAK packet with an error code of DC_ERR_BUFFER_FULL to the HOST if the buffer is full. If the buffer is full, all data transmitted to the SDP-5 will be ignored. Therefore, making the currently transmitted packet, if partially transmitted invalid.

4.5 SDP-5 Hardware Verification

This test verifies the RS232 ports are working by comparing the transmitted signal (at pin 2) to the received signal (at pin 3). The SDP-5 transmits a known test signal just following a power up. The SDP-5 monitors the serial port receivers while transmitting the test signal. If the signals are the same, the test passes. In order to test this circuit, RS232 Wraparound plug(s) are needed and must be installed at the female D9 connector(s) on the rear panel of the SDP-5 labeled "RS232". The wraparound plug shorts pins 2 to 3, allowing for the SDP-5 to receive the signal it is transmitting. Once installed, power cycle the SDP-5 and verify the following message is displayed on the FPD:

SERIAL PORT A PASSED
SERIAL PORT B PASSED

This message is displayed for about 2 seconds before entering normal operating mode. If no messages are displayed, then both wrap tests failed.

5 Data Link Layer

The data link layer is used to define a transmission packet. The layer appends a header and tail that encloses the transmitted application packet data. The data link header will contain the start of packet byte and count of bytes to follow. The data link tail will contain the end of packet byte.

Data Link Header:		
Byte Number	Description	Value
First Byte(0)	Start of Packet (SOP)	0xF1
Byte(1)	DLL Data Count	nn
Application Header:		
Byte(2)	Command	nn
Byte(3)	APP Data Count (number of application data bytes to Follow)	nn
Application Data:		
Byte(4)	Data[0]	nn
Byte(5)	Data[1]	nn
...	Data[...]	nn
Last Data Byte -1	Data[Data Count -1]	nn
Data Link Tail:		
Last Byte	End of Packet (EOP)	0xF2

5.1 Errors

If the number of DLL data bytes received is the same as the data count and an EOP has not been received, the SDP-5 responds by transmitting a NAK packet with an error code DC_ERR_INVALID_PACKET. The SDP-5 then continues to look for a SOP byte and will not process the erroneous application packet. The HOST can use this as an indicator to retransmit the corrupted packet.

In addition, each byte of a packet must be received sequentially and within the INTER_PACKET_TIME. If any of the bytes within a packet transmission exceeds the INTER_PACKET_TIME, the SDP-5 will respond by transmitting a NAK packet with an error code DC_ERR_INVALID_PACKET. The SDP-5 then continues to look for a SOP byte and will not process the erroneous application packet. The HOST can use this as an indicator to retransmit the corrupted packet.

6 Application Layer

6.1 SDP-5 Asynchronous Notification Packets

SDP-5 has been designed to transmit the asynchronous notification packets following these system changes:

1. Power On
2. Entering Standby
3. Front Panel Display update
4. Parameter Value Changes.

The notification packets are defined as follows:

6.1.1 Wakeup Notification

By transmitting the Wakeup Notification, SDP-5 indicates the unit has just “powered on” or reset and is ready to receive host commands. This notification is primarily for the HOST to know the status of the SDP-5

6.1.1.1 Notification Packet Description

Application Header:		
Command	DC_WAKEUP	0x01
Data Count	0	0x00
Application Data:		
	N/A	

6.1.1.2 Host Response

The SDP-5 does not expect any response from the HOST.

6.1.2 Sleep Notification

By transmitting the Sleep Notification, SDP-5 indicates the unit is shutting down into a standby mode. Because the hard power switch could be activated independently of the SDP-5 system software, hard power down will not be notified. Acknowledgment of the Sleep Notification is not required. This notification is primarily for the HOST to know the operating status of the SDP-5

6.1.2.1 Notification Packet Description

Application Header:		
Command	DC_SLEEP	0x02
Data Count	0	0x00
Application Data:		
	N/A	

6.1.3 Front Panel Display

SDP-5 will transmit the front panel display buffer following the update to the SDP-5 front panel display. The SDP-5 front panel display is 2 X 20 ASCII character display. The HOST can enable transmission of this notification message by sending Host Wakeup (7.3.29). To disable transmission the HOST can send Host Sleep (7.3.30). Transmission of the display buffer is asynchronous to other host/SDP-5 communication and will only transmit following the completion of any communication exchanges in progress or pending.

6.1.3.1 Notification Packet Description

Application Header:		
Command	DC_FPD	0x03
Data Count	42	0x2A
Application Data:		
Data[0] - Data[20]	Line1	ch ch ch... 0x00
Data[21] - Data[41]	Line2	ch ch ch ... 0x00

6.1.3.2 Data Description

Line1

Data Type: Null (0x00) terminated ASCII character string.
 Max Length: DISP_LINE_LENGTH defined in [Appendix G Protocol Constants](#).

Line2

Data Type: Null (0x00) terminated ASCII character string.
 Max Length: DISP_LINE_LENGTH defined in [Appendix G Protocol Constants](#).

The SDP-5 includes 8 custom characters that are defined to display increments of a display block. (i.e. Volume Bar)
 The custom characters are ASCII character codes 8E - 93(hex). The codes are used as follows:

'8E' - empty cell
 '8F' - left 1 bar
 '90' - left 2 bars
 '91' - left 3 bars
 '92' - left 4 bars
 '93' - full cell

6.1.3.3 HOST Response

The SDP-5 does not expect any response from the HOST.

6.1.4 SDP-3 Parameter Change

SDP-5 will transmit predetermined parameter change notifications. If a parameter value is changed due to any user action or system action the SDP-5 will transmit the current value of the parameter that is changing.

This command has been maintained for backward compatibility with SDP-3. In order to maintain backward compatibility, the SDP-3 Parameters have been mapped to the SDP-3 parameters as described in the Supported System Parameters table listed below.

SDP-3 Parameter Change Notification can be enabled/disabled by using the Communication Configuration Packet as described in [6.3.19 Get Communication Configuration](#) and [6.3.20 Set Communication Configuration](#)

The SDP-5 disables these notifications in its default state.

6.1.4.1 Notification Packet Description

Application Header:		
Command	DC_PARAM_CHG_MSG	0x04
Data Count	2	0x02
Application Data:		
Data[0]	ParamId	nn
Data[1]	Value	nn

6.1.4.2 Data Description

ParamId:

Data Type: Unsigned 8 bit integer
 Max: 255.

Value:

The Current Value for this system parameter.

Data Type: Unsigned 8 bit integer
 Max: Set by the Max Value per the Parameter Definition response Packet for the Parameter Id of this packet.

6.1.4.3 HOST Response

The SDP-5 does not expect any response from the HOST.

6.1.4.4 Supported System Parameters

The following parameters will be supported by this Parameter Change Notification:

Parameter	SDP-5 Parameter Name	SDP-3 ParamId(V4.00)
Current Effect	PROGRAM	1
Mute	MUTE	3
System Volume	VOLUME	5
Balance	LR_BALANCE	6
Input Selection	INPUT	7
Zone 2 Volume	Z2_VOL	154
Zone 2 Balance	Z2_BAL	156
Zone 2 Mute	Z2_MUTE	157
Bass	BASS	167
Treble	TREBLE	168
Loudness	LOUDNESS	169
Tilt	TILT	174
Menu Background On/Off	MENU_BKGND	190

For Input Parameter Change Notifications the Input Value is a SDP-5 to SDP-3 input mapping, as shown in [Appendix E SDP-3 Input Id's](#).

6.1.5 SDP-5 Parameter Notification by Id

SDP-5 will transmit parameter change notifications if they are enabled using the command described in [6.3.29 \(SDP-5 Set Parameter Notification By Id\)](#). If a parameter value is changed due to any user action or system action the SDP-5 will transmit the current value of the parameter that is changing.

6.1.5.1 Command Packet Description

Application Header:		
Command	MC_PARAM_NOTIFICATION_BY_ID	0x05
Data Count	24	0x18
Application Data:		
Data[0]	ParamId(LSB)	nn
Data[1]	ParamId(MSB)	nn
Data[2]	ParamType	nn
Data[3-23]	Value[0 -20]	nn nn nn...

6.1.5.2 Data Description

Same as [Paragraph 6.3.24.2](#)

6.1.5.3 HOST Response

The SDP-5 does not expect any response from the HOST.

6.1.5.4 Defaults

The following Parameters Notifications are Enabled in the SDP-5 default state:

Parameter	SDP-5 Parameter Name	
Current Mode	HPARAM_MAIN_EFFECT	
Main Zone Mute	HPARAM_MAIN_MUTE	
Main Zone Volume	HPARAM_MAIN_VOLUME	
Main Zone Balance	HPARAM_MAIN_BALANCE	
Main Zone Input Selection	HPARAM_MAIN_INPUT	
Zone 2 Input	HPARAM_ZONE_INPUT	
Zone 2 Volume	HPARAM_ZONE_VOLUME	
Zone 2 Balance	HPARAM_ZONE_BALANCE	
Zone 2 Mute	HPARAM_ZONE_MUTE	
Bass	HPARAM_MAIN_BASS	
Treble	HPARAM_MAIN_TREBLE	
Loudness	HPARAM_MAIN_LOUDNESS	
Tilt	HPARAM_MAIN_TILT	
Menu Background On/Off	HPARAM_OSD_BACKGND	

See [6.9 SDP-5 V1.00 Parameter ID List](#) for the Parameter ID definitions.

6.2 Acknowledgment Packets

Acknowledge and No Acknowledge packets are used to communicate transmission, packet and data validation status. Both the HOST and SDP-5 can transmit and receive these packets.

6.2.1 Acknowledge

6.2.1.1 Packet Description

Application Header:		
Command	DC_ACK	0xE0
Data Count		10x01
Application Data:		
Data[0]	Command	nn

6.2.1.2 Data Description

Command:

Data Type: Valid SDP-5 command as defined in [Appendix A Command Codes](#).

6.2.2 No Acknowledge

6.2.2.1 Packet Description

Application Header:		
Command	DC_NACK	0xE1
Data Count	2	0x02
Application Data:		
Data[0]	Command	nn
Data[1]	ErrorCode	nn

6.2.2.2 Data Description

Command:

DataType: Valid SDP-5 command as defined in [Appendix A Command Codes](#).

ErrorCode:

DataType: Error code as defined in [Appendix B Error Codes](#).

6.3 Host Initiated Command Packets

The SDP-5 serial communication protocol has been designed to respond to the following commands as described below. Each command is transmitted to the SDP-5 with the identified parameters. If the command is successfully received and processed by the SDP-5, the unit will respond with the described response packet or action.

6.3.1 Reset Unit

Commands the SDP-5 to soft reset.

6.3.1.1 Command Packet Description

Application Header:		
Command	DC_CMD_RESET	0x10
Data Count	0	0x00
Application Data:		
	N/A	

6.3.1.2 SDP-5 Response

The SDP-5 will perform an internal reset. After reset the SDP-5 will go through a soft power-up initialization. This includes transmitting the “Wakeup Notification Packet”. A soft reset does not reinitialize the SDP-5. Nonvolatile RAM is maintained.

6.3.2 Restore

Commands the SD-5 to restore the system and effect parameters to the factory defaults.

6.3.2.1 Command Packet Description

Application Header:		
Command	DC_CMD_RESTORE_DEFAULTS	0x13
Data Count	0	0x00
Application Data:		
	N/A	

6.3.2.2 SDP-5 Response

The SDP-5 will reset, clear any saved system and effect parameters in Nonvolatile RAM, and restore the factory default system and effect parameters. After reset the SDP-5 will go through a soft power-up initialization. This includes transmitting the “Wakeup Notification Packet”.

6.3.3 SDP-3 Send IR Command

Transmits SDP-3 IR command key codes to the SDP-5.

This command has been maintained for backward compatibility to the SDP-3. The SDP-3 IR code functionality has been mapped to the SDP-5 IR code functionality as per the SDP-3 to SDP-5 IR code table. SDP-5 users should use the command described in [6.3.27 \(SDP-3 Send IR Command\)](#).

6.3.3.1 Command Packet Description

Application Header:		
Command	DC_CMD_IR	0x14
Data Count	1	0x01
Application Data:		
Data[0]	KeyCode	nn

6.3.3.2 Data Description

KeyCode:

Data Type: Unsigned 8 bit integer

Valid Values: [Appendix C SDP-3 IR-Codes](#)

6.3.3.3 SDP-5 Response

The KeyCode is processed as a valid IR code. No acknowledgment will be sent from SDP-5

6.3.3.4 Data Validation

The KeyCode data will be verified as a legal IR code. If the Code is not valid the SDP-5 will not respond.

6.3.4 Get Unit Configuration

Request to SDP-5 for its current unit configuration.

This command is supported for backward compatibility. SDP-5 users should use the command described in [6.3.26 \(SDP-5 Get Unit Configuration\)](#). SDP-5 will respond with “Unit Configuration Packet”. The HOST should use this information to determine if any information saved by the HOST is current.

6.3.4.1 Command Packet Description

Application Header:		
Command	DC_CMD_GET_CONFIG	0x15
Data Count	0	0x00
Application Data:		
	N/A	

6.3.4.2 SDP-5 Unit Configuration Response Packet

Application Header:		
Command	DC_RESP_UNIT_CONFIG	0x80
Data Count	25	0x19
Application Data:		
Data[0]	ProductId	nn
Data[1]	Software Type	nn
Data[2]	Software Level	nn
Data[3]	Software Major Revision	nn
Data[4]	Software Minor Revision	nn
Data[5]	Protocol Major Revision	nn
Data[6]	Protocol Minor Revision	nn
Data[7]	N/A	nn
Data[8]	Total Number of Effects	nn
Data[9]	TimeStamp[0]	ch
Data[10]	TimeStamp[1]	ch
Data[11]	TimeStamp[2]	ch
Data[12]	TimeStamp[3]	ch
Data[13]	TimeStamp[4]	ch
Data[14]	TimeStamp[5]	ch
Data[15]	TimeStamp[6]	ch
Data[16]	TimeStamp[7]	ch
Data[17]	TimeStamp[8]	ch
Data[18]	TimeStamp[9]	ch
Data[19]	TimeStamp[10]	ch
Data[20]	TimeStamp[11]	ch
Data[21]	TimeStamp[12]	ch
Data[22]	TimeStamp[13]	ch
Data[23]	TimeStamp[14]	ch
Data[24]	TimeStamp[15]	0x00

6.3.4.3 Data Description

ProductId: This unsigned 8 bit value describes the product.

Product ID	
Lexicon DC-2	1
Lexicon MC-1	2
JBL Synthesis SDP-3	3
Lexicon MC-12	4
JBL Synthesis SDP-40	5
Lexicon MC-8	6
JBL Synthesis SDP-5	7

Software Type: An unsigned 8 bit value indicating the current configuration of the unit's software. The following table shows the values assigned to the available types:

SW Type	
THX	1
AC3	2
DTS	3
COMPLETE	4
BOOTROM	5

Software Level: The following table shows the values assigned to the possible software levels:

SW Level	
RELEASED	0
PRE_ALPHA	1
ALPHA	2
BETA	3
GAMMA	4
UNSUPPORTED	5

*Note: SW level indicates the status of the SDP-5 internal application software.

Software Major Revision: An unsigned integer value indicating the unit's major software version. The host should use this information to determine if new effects, effect parameters, or system parameters have been added or removed.

Software Minor Revision: An unsigned integer value indicating this unit's minor software version. Indicates the units software operation has changed but effects, effect parameters, or system parameters have not changed.

Protocol Major Revision: An unsigned integer value indicating the serial communication protocol major version. The host should use this value to determine if new commands, notifications, or response packets have been added or deleted from this specification.

Protocol Minor Revision: An unsigned integer value indicating the serial communication protocol minor version. The host should use this value to determine if the existing commands, notifications, or response packets have changed in this specification

Total Number of Effects: An unsigned integer value indicating the maximum number of effects available for this version of software. This should be used to determine the maximum EffectId used in the “Get Effect Definition Packet”, “Get Effect Parameter Definition Packet”, “Set Effect Name Packet”, and “Set Effect Parameter Values Packet”.

TimeStamp: Is a null terminated ASCII text string describing the build date and time of the current software build. The Format of this text string is:
 “yy/mm/dd(sp)hh:mm”
 yy- is the last two digits of the year (i.e. year 1999 = 99, year 2000 = 00)
 mm - is the month
 dd- is the day
 (sp) - is an ASCII space character (0x20)
 hh - is the hour
 mm - is the minute

6.3.5 Get System Status

Request to SDP-5 for its current system status. SDP-5 will respond with “System Status Packet”.

This command has been maintained for backward compatibility with SDP-3. In order to maintain backward compatibility, the SDP-5 Parameters have been mapped to the SDP-3 parameters as described in each Data Description. SDP-5 users should be using the command described in [6.3.32 \(SDP-5_Get_System_Status\)](#).

6.3.5.1 Command Packet Description

Application Header:		
Command	DC_CMD_GET_SYS_STATUS	0x16
Data Count	0	0x00
Application Data:		
	N/A	

6.3.5.2 System Status Response Packet

Application Header:		
Command	DC_RESP_SYS_STATUS	0x81
Data Count	10	0x0A
Application Data:		
Data[0]	System Volume	nn
Data[1]	Current Input	nn
Data[2]	Current Effect Id	nn
Data[3]	Current Input Sample Rate	nn
Data[4]	Current Input Format	nn
Data[5]	Mute Active	nn
Data[6]	Effect Bypass	nn
Data[7]	Left/Right Balance	nn
Data[8]	Front/Back Balance	nn
Data[9]	Video Synch	nn

6.3.5.3 Data Description

System Volume:

Data Type: Unsigned 8 bit integer.
 Maximum Value: 92
 Conversion: 0 = -80 dB
 92 = +12 dB

Current Input:

Data Type: Unsigned 8 bit integer
 Definition/Conversion: [Appendix F SDP-5 Input Ids](#)

Current Effect Id:

Data Type: Unsigned 8 bit integer
 Definition/Conversion: [Appendix H SDP-5 to SDP-3 Effect Map](#)

Current Input Sample Rate:

Data Type: Unsigned 8 bit integer.

SAMPLE RATE	
RATE_UNKNOWN	0
RATE_44	1
RATE_48	2
RATE_88	3
RATE_96	4

Current Input Format:

Data Type: Unsigned 8 bit integer.

DATA STREAM TYPE	
DATA_TYPE_UNKNOWN	0
DATA_TYPE_BYPASS	1
DATA_TYPE_ANALOG	2
DATA_TYPE_PCM	3
DATA_TYPE_DD	4
DATA_TYPE_DTS	5
DATA_TYPE_NOISE	6

Mute Active:

Data Type: Boolean.
 TRUE: System Mute is Active
 FALSE: System is unmuted.

Effect Bypass:

Data Type: Boolean
 TRUE: Effect Bypass is Active
 FALSE: Effect Bypass is Inactive

Left/Right Balance:

Data Type: Unsigned 8 bit integer.
 Maximum Value: 32
 Conversion: 0 = Left
 16 = Center
 32 = Right

Front/Back Balance:

Data Type: Unsigned 8 bit integer.

Maximum Value: 32

Conversion: 0 = Front
16 = Center
32 = Back

Video Synch:

Data Type: Boolean.

TRUE: SDP-5 has detected Video Sync for current video input

FALSE: SDP-5 can not detect Video Sync for the current video input

6.3.6 Get Zone 2 Status

This command is a request to SDP-5 for current Zone 2 Status. SDP-5 will respond with “Zone2 Status Packet”.

This command has been maintained for backward compatibility with SDP-3. In order to maintain backward compatibility, the SDP-5 Parameters have been mapped to the SDP-3 parameters as described in each Data Description. SDP-5 users should be using the command described in [6.3.33 \(SDP-5 Get Zone 2 Status\)](#).

6.3.6.1 Command Packet Description

Application Header:		
Command	DC_CMD_GET_ZONE2_STATUS	0x17
Data Count	0	0x00
Application Data:		
	N/A	

6.3.6.2 Zone2 Status Response Packet

Application Header:		
Command	DC_RESP_ZONE2_STATUS	0x82
Data Count	5	0x05
Application Data:		
Data[0]	Zone2 Volume	nn
Data[1]	Assigned Zone 2 Input	nn
Data[2]	Zone2 Mute Active	nn
Data[3]	Reserved for Future Use	nn
Data[4]	Zone2 Balance	nn

6.3.6.3 Data Description

Zone2 Volume:

Data Type: Unsigned 8 bit integer.

Maximum Value: 92

Conversion: 0 = -80 dB
92 = +12 dB

Assigned Zone 2 Input:

Indicates the Zone 2 input that is currently assigned for the zone 2 outputs.

Data Type: Unsigned 8 bit integer.

Definition/Conversion: [Appendix F SDP-5 Input Ids](#)

Zone2 Mute Active:

Data Type: Boolean.
 TRUE: Zone2 Outputs are active.
 FALSE: Zone 2 Outputs are not active.

Zone 2 Balance:

Data Type: Unsigned 8 bit integer.
 Maximum Value: 32
 Conversion: 0 = Left
 32 = Right

6.3.7 Get Custom Name

Request to SDP-5 for an effect definition. SDP-5 will respond with “Custom Name Packet”.

6.3.7.1 Command Packet Description

Application Header:		
Command	DC_CMD_GET_CUST_NAME	0x2B
Data Count	0	0x00
Application Data:		
	N/A	

6.3.7.2 Data Description

N/A

6.3.7.3 Custom Name Response Packet

Application Header:		
Command	DC_RESP_CUST_NAME	0x89
Data Count	Number of Characters in CustomName + 1	nn
Application Data:		
Data[0]- Data[DataCount-1]	CustomName	ch ch ch ... 0x00

6.3.7.4 Data Description

CustomName:

Data Type: Null (0x00) terminated ASCII character string.
 Max Length: CUSTOM_NAME_LENGTH defined in [Appendix G Protocol Constants](#).

6.3.8 Get Input Name by Id

This command is a request to SDP-5 for the custom input name. SDP-5 will respond with “Input Name Packet”.

This command has been maintained for backward compatibility with SDP-3. In order to maintain backward compatibility, the SDP-5 Parameters have been mapped to the SDP-3 parameters as described in each Data Description. SDP-5 users should be using the command described in [6.3.40 \(SDP-5 Get Input Name By Id\)](#).

6.3.8.1 Command Packet Description

Application Header:		
Command	DC_CMD_GET_INPUT_NAME	0x2D
Data Count	1	0x01
Application Data:		
Data[0]	InputId	nn

6.3.8.2 Data Description

InputId:

Data Type: Unsigned 8 bit Integer
 Definition/Conversion: [Appendix F SDP-5 Input Ids](#)

6.3.8.3 Data Validation:

The InputId must be a valid Input number. If it is not the SDP-5 will respond with a NAK packet and error code DC_INVALID_INPUT.

6.3.8.4 Input Name Response Packet

Application Header:		
Command	DC_RESP_INPUT_NAME	0x8A
Data Count	Number of Characters in InputName + 2	Nn
Application Data:		
Data[0]	InputId	Nn
Data[1]- Data[DataCount-1]	InputName	ch ch ch ... 0x00

6.3.8.5 Data Description

InputId:

Data Type: Unsigned 8 bit Integer
 Definition/Conversion: [Appendix F SDP-5 Input Ids](#)

InputName:

Data Type: Null (0x00) terminated ASCII character string.
 Max Length: INPUT_NAME_LENGTH defined in [Appendix G Protocol Constants](#).

6.3.9 Set System Volume

This command is a request to the SDP-5 to set the system volume with the value in this packet.

This command has been maintained for backward compatibility with SDP-3. In order to maintain backward compatibility, the SDP-5 Parameters have been mapped to the SDP-3 parameters as described in each Data Description. SDP-5 users should be using the command described in [6.3.34 \(SDP-5 Set System Volume\)](#).

6.3.9.1 Command Packet Description

Application Header:		
Command	DC_CMD_SET_SYS_VOLUME	0x21
Data Count	1	0x01
Application Data:		
Data[0]	Value	nn

6.3.9.2 Data Description

Value:

Data Type:	Unsigned 8 bit integer.
Max:	92
Conversion:	0 = -80 dB 92 = +12 dB

6.3.9.3 SDP-5 Response

The SDP-5 will assign the value from the packet to the system volume.

6.3.9.4 Data Validation

If a value is passed that exceeds the maximum value of that parameter the SDP-5 will ignore the command and transmit a DC_NAK command with an error code DC_INVALID_DATA.

6.3.10 Set Main Balance

Commands SDP-5 to set the system balance to the value in this packet.

This command has been maintained for backward compatibility with SDP-3. In order to maintain backward compatibility, the SDP-5 Parameters have been mapped to the SDP-3 parameters as described in each Data Description. SDP-5 users should be using the command described in [6.3.35 \(SDP-5 Set Main Balance\)](#).

6.3.10.1 Command Packet Description

Application Header:		
Command	DC_CMD_SET_SYS_BALANCE	0x22
Data Count	1	0x01
Application Data:		
Data[0]	Value	nn

6.3.10.2 Data Description

Value:

Data Type:	Unsigned 8 bit integer.
Maximum Value:	32
Conversion:	0 = Left 16 = Center 32 = Right

6.3.10.3 SDP-5 Response

The SDP-5 will assign the value from the packet to the system balance.

6.3.10.4 Data Validation

If a value is passed that exceeds the maximum value of that parameter the SDP-5 will ignore the command and transmit a DC_NAK command with an error code DC_INVALID_DATA.

6.3.11 Set Front/Back Balance

Commands SDP-5 to set the front/back balance to the value in this packet.

This command has been maintained for backward compatibility with SDP-3. In order to maintain backward compatibility, the SDP-5 Parameters have been mapped to the SDP-3 parameters as described in each Data Description. SDP-5 users should be using the command described in [6.3.36 \(SDP-5 Set Front Back Balance\)](#).

6.3.11.1 Packet Description

Application Header:		
Command	DC_CMD_SET_FRONT_BACK_BALANCE	0x23
Data Count	1	0x01
Application Data:		
Data[0]	Value	nn

6.3.11.2 Data Description

Value:

Data Type:	Unsigned 8 bit integer.
Max:	32
Conversion:	0 = Front 16 = Center 32 = Back

6.3.11.3 SDP-5 Response

The SDP-5 will assign the value from the packet to the front/back balance.

6.3.11.4 Data Validation

If a value is passed that exceeds the maximum value of that parameter the SDP-5 will ignore the command and transmit a NAK command with an error code DC_INVALID_DATA.

6.3.12 Set Active Effect by Id

This command requests the SDP-5 to set the active effect to the value in this packet.

This command has been maintained for backward compatibility with SDP-3. In order to maintain backward compatibility, the SDP-5 Parameters have been mapped to the SDP-3 parameters as described in each Data Description. SDP-5 users should be using the command described in [6.3.37 \(SDP-5 Set Active Effect By Id\)](#).

6.3.12.1 Command Packet Description

Application Header:		
Command	DC_CMD_SET_EFFECT	0x24
Data Count	1	0x01
Application Data:		
Data[0]	EffectId	nn

6.3.12.2 Data Description

EffectId:

Data Type: Unsigned 8 bit integer

Definition/Conversion: [Appendix I SDP-3 to SDP-5 Effect ID Map](#).

6.3.12.3 SDP-5 Response

The SDP-5 will load the desired effect.

6.3.12.4 Data Validation

If a value is passed that exceeds the maximum value of that parameter the SDP-5 will ignore the command and transmit a NAK command with an error code DC_INVALID_DATA.

6.3.13 Set Zone2 Volume

Commands SDP-5 to set the Zone 2 volume with the value in this packet.

This command has been maintained for backward compatibility with SDP-3. In order to maintain backward compatibility, the SDP-5 Parameters have been mapped to the SDP-3 parameters as described in each Data Description. SDP-5 users should be using the command described in [6.3.38 \(SDP-5 Set Zone2 Volume\)](#).

6.3.13.1 Command Packet Description

Application Header:		
Command	DC_CMD_SET_ZONE2_VOLUME	0x27
Data Count	1	0x01
Application Data:		
Data[0]	Value	nn

6.3.13.2 Data Description

Value:

Data Type: Unsigned 8 bit integer.

Max: 92

Conversion: 0 = -80 dB
92 = +12 dB

6.3.13.3 SDP-5 Response

The SDP-5 will assign the value from the packet to the Zone 2 volume.

6.3.13.4 Data Validation

If a value is passed that exceeds the maximum value of that parameter the SDP-5 will ignore the command and transmit a NAK command with an error code DC_INVALID_DATA.

6.3.14 Set Zone2 Left/Right Balance

Commands SDP-5 to set the Zone 2 balance to the value in this packet.

This command has been maintained for backward compatibility with SDP-3 In order to maintain backward compatibility, the SDP-5 Parameters have been mapped to the SDP-3 parameters as described in each Data Description. SDP-5 users should be using the command described in [6.3.39 SDP-5_Set_Zone2_Left_Right_Balance](#).

6.3.14.1 Packet Description

Application Header:		
Command	DC_CMD_SET_ZONE2_BALANCE	0x28
Data Count	1	0x01
Application Data:		
Data[0]	Value	nn

6.3.14.2 Data Description

Value:

Data Type: Unsigned 8 bit integer
 Max: 32
 Conversion: 0 = Left
 32 = Right

6.3.14.3 SDP-5 Response

The SDP-5 will assign the value from the packet to the Zone 2 balance.

6.3.14.4 Data Validation

If a value is passed that exceeds the maximum value of that parameter the SDP-5 will ignore the command and transmit a NAK command with an error code DC_INVALID_DATA.

6.3.15 Set Custom Name

Sets the Custom Name that can be displayed when the unit powers up.

6.3.15.1 Packet Description

Application Header:		
Command	DC_CMD_SET_CUST_NAME	0x2C
Data Count	Number of characters in CustomName + 2	nn
Application Data:		
Data[0]	CustomNameEnable	nn
Data[1]-Data[DataCount-1]	CustomName	ch ch ch ... 0x00

6.3.15.2 Data Description

CustomNameEnable: Enables/Disables the Custom Name Display.
 DataType: Boolean
 TRUE: CustomName Enabled

FALSE: CustomName Disabled

CustomName:

Data Type: Null (0x00) terminated ASCII character string.

Max Length: CUSTOM_NAME_LENGTH defined in [Appendix G Protocol Constants](#).

6.3.15.3 SDP-5 Response

If the custom name enable is TRUE then the custom name banner is display on “power on”. If the Custom Name Enable is FALSE the custom name is not displayed. The CustomName string is copied to Nonvolatile RAM. The SDP-5 will ACK when completed with this command.

6.3.15.4 Data Validation:

No data validation is done on the transmitted data.

6.3.16 Set Input Name by Id

Sets an Input Name to the transmitted value for a given input.

This command has been maintained for backward compatibility with SDP-3. In order to maintain backward compatibility, the SDP-5 Parameters have been mapped to the SDP-3 parameters as described in each Data Description. SDP-5 users should be using the command described in [6.3.41 \(SDP-5 Set Input Name By Id\)](#).

6.3.16.1 Command Packet Description

Application Header:		
Command	DC_CMD_SET_INPUT_NAME	0x2E
Data Count	Number of characters in InputName + 2	nn
Application Data:		
Data[0]	InputId	0 to 7
Data[1]-Data[DataCount-1]	InputName	ch ch ch ... 0x00

6.3.16.2 Data Description

InputId:

Data Type: Unsigned 8 bit Integer

Description/Conversion: [Appendix F SDP-5 Input Id's](#)

InputName:

Data Type: Null (0x00) terminated ASCII character string.

Max Length: INPUT_NAME_LENGTH defined in [Appendix G Protocol Constants](#).

6.3.16.3 SDP-5 Response

SDP-5 will copy the InputName to the given input.

6.3.16.4 Data Validation:

The InputId must be a valid Input Id. If it is not the SDP-5 will respond with a NAK packet and error code DC_INVALID_INPUT. If the InputName string exceeds the INPUT_NAME_LENGTH, the SDP-5 will truncate the string to the INPUT_NAME_LENGTH.

6.3.17 Host Wakeup

By transmitting the Wakeup Notification, the Host indicates it has just “powered on” or reset and is ready to receive SDP-5 Notifications or Responses. The Host is assumed to be asleep upon power up of the SDP-5. Host status is maintained during standby.

6.3.17.1 Command Packet Description

Application Header:		
Command	HOST_WAKEUP	0x11
Data Count	0	0x00
Application Data:		
	N/A	

6.3.17.2 Data Description

N/A

6.3.17.3 SDP-5 Response

The SDP-5 will respond to this command with an ACK.

6.3.18 Host Sleep

By transmitting the Sleep command, the Host indicates it has just “powered down” and will no longer respond to SDP-5 Notifications. No Acknowledgment is expected. The Host is assumed to be asleep upon power up of the SDP-5. Host status is maintained during standby.

6.3.18.1 Packet Description

Application Header:		
Command	HOST_SLEEP	0x12
Data Count	0	0x00
Application Data:		
	N/A	

6.3.18.2 Data Description

N/A

6.3.19 Get Communication Configuration

This command is a request to the SDP-5 for the current communications configuration for the serial port and protocol. The SDP-5 responds to this command with a Communication Configuration Packet.

6.3.19.1 Command Packet Description

Application Header:		
Command	DC_CMD_GET_COM_CONFIG	0x2F
Data Count	0	0x00
Application Data:		
	N/A	

6.3.19.2 Communication Configuration Response Packet

Application Header:		
Command	DC_RESP_COM_CONFIG	0x8C
Data Count	1	0x01
Application Data:		
Data[0]	Configuration Register 0	nn

6.3.19.3 Data Description

Data Word	Bit	Definition
0	0	Acknowledge Enable
0	1	Parameter Change Enable

Acknowledge Enable:

- TRUE Indicates the SDP-5 will transmit Acknowledge Notification's to the Host.
 FALSE Indicates the SDP-5 will not transmit any positive Acknowledge Notification messages.
 The SDP-5 will always transmit NAK error notification messages.

Parameter Change Enable:

- TRUE Indicates the SDP-5 will transmit any parameter change Notification as specified in the
 Parameter Change Notification Message.
 FALSE Indicates the SDP-5 will not transmit parameter change Notifications.

6.3.20 Set Communication Configuration

The Set Communication Configuration Command allows the serial port user to set up the various serial port/protocol configuration parameters.

6.3.20.1 Command Packet Description

Application Header:		
Command	DC_CMD_SET_COM_CONFIG	0x30
Data Count	1	0x01
Application Data:		
Data[0]	Configuration Register 0	nn

6.3.20.2 Data Description

Data Word	Bit	Definition
0	0	Acknowledge Enable
0	1	Parameter Change Enable

Acknowledge Enable:

- TRUE Indicates the SDP-5 will transmit Acknowledge Notification's to the Host.
 FALSE Indicates the SDP-5 will not transmit any positive Acknowledge Notification messages.
 The SDP-5 will always transmit NAK error notification messages.

Parameter Change Enable:

- TRUE Indicates the SDP-5 will transmit any parameter change Notification as specified in the
 Parameter Change Notification Message.
 FALSE Indicates the SDP-5 will not transmit parameter change Notifications.

6.3.20.3 SDP-5 Response

The data values transmitted will be copied over to the registers stored in nonvolatile RAM. The SDP-5 will respond with an ACK Packet.

6.3.21 Set Mute

The Set Mute Command message allows the RS232 users to set/clear the SDP-5 mute state directly.

6.3.21.1 Command Packet Description

Application Header:		
Command	DC_CMD_SET_MUTE	0x31
Data Count	1	0x01
Application Data:		
Data[0]	Mute State	nn

6.3.21.2 Data Description

MUTE State:

Value	Definition	Description
0	UNMUTE	The user mute state is set to unmuted. The SDP-5 may still be muted for other internal reasons.
1	USER MUTE	The system volume decrements by the specified user amount as set in the OUTPUT LEVELS Menu.
2	FULL MUTE	The system is fully muted.

6.3.21.3 SDP-5 Response

The SDP-5 will set the mute state according to the value transmitted. The SDP-5 may still be full muted if other conditions require the audio path to be muted. This is only a direct access to the user mute state.

6.3.21.4 Data Validation

The data value transmitted to the SDP-5 will be verified as a valid value. If it is valid the SDP-5 will set/clear the mute and respond with an ACK Packet. If the data value is invalid the SDP-5 will respond with a DC_INVALID_DATA error NAK.

6.3.22 Send Display String Command

This command allows the Host to send a 40 character string to the SDP-5 for display on the OSD and Front Panel Display.

6.3.22.1 Packet Description

Application Header:		
Command	DC_CMD_SET_DISPLAY_STR	0x33
Data Count	Number of characters in the DisplayStr + 2	nn
Application Data:		
Data[0]	DisplayFlags	nn
Data[1]-Data[DataCount-1]	DisplayStr	ch ch ch ... 0x00

6.3.22.2 Data Description

Display Command Flags:

Word	Bit	Definition
0	0	FPD only: If set TRUE, the display string will only be sent to the FPD device for display.
0	1	Undefined.
0	2	Undefined.
0	3	Undefined.
0	4	Undefined.
0	5	Undefined.
0	6	Undefined.
0	7	Undefined.

Display String:

Data Type: Null (0x00) terminated ASCII character string.
 Max Length: 40 Characters.

6.3.22.3 SDP-5 Response

The display string is sent to the OSD and Front Panel Display. The SDP-5 will ACK when completed with this command.

6.3.22.4 Data Validation:

If a string length exceeds the 40 character maximum the string will be truncated before displaying and the SDP-5 transmit a DC_NAK command with an error code DC_INVALID_DATA.

6.3.23 SDP-5 Get Parameter Definition by Id

Request to SDP-5 for a Parameter Definition by Parameter Id. SDP-5 will respond with "SDP-5 Parameter Definition Packet".

6.3.23.1 Command Packet Description

Application Header:		
Command	MC_GET_PARAM_BY_ID	0x35
Data Count	2	0x02
Application Data:		
Data[0]	ParamId(LSB)	nn
Data[1]	ParamId(MSB)	nn

6.3.23.2 Data Description

ParamId:

Data Type: Unsigned 16 bit Integer
 Max Value: Max Parameter Count as reported by the SDP-5 Unit Configuration Response Packet in 6.3.26.2

6.3.23.3 Data Validation:

If the ParamId is not a valid Id the SDP-5 will respond with a NAK packet and error code DC_INVALID_PARAM_ID.

6.3.23.4 Parameter Definition Response Packet

The following Packet has been defined as follows for SDP-5 V1.00. Future releases may modify this definition.

Application Header:		
Command	MC_SYS_PARAM_DEF_PKT	0x8F
Data Count	110	0x6E
Application Data:		
Data[0]	ParamId(LSB)	nn
Data[1]	ParamId(MSB)	nn
Data[2]	ParamType	nn
Data[3]	MAX Value(LSB)	nn
Data[4]	MAX Value(MSB)	nn
Data[5]	MIN Value(LSB)	nn
Data[6]	MIN Value(MSB)	nn
Data[7-27]	CurrentValue[0 -20]	nn nn nn...
		ch ch ch ...
Data[28]-Data[108]	Parameter Path	0x00
Data[108]	Read Only	nn

6.3.23.5 Data Description

ParamId:

Data Type: Unsigned 16 bit Integer

Max Value: Max Parameter Count as reported by the SDP-5 Unit Configuration Response Packet in 6.3.26.2

ParamType:

Param Type Name	ParamType ID	Type Description	Data Size (Bytes)
PARAM_TYPE_UINT8	0	Unsigned 8 bit integer(0 to 255)	1
PARAM_TYPE_UINT16	1	Unsigned 16 bit integer(0 to 65535)	2
PARAM_TYPE_CSTR8	2	Zero terminated string of 8 ascii characters	9
PARAM_TYPE_CSTR13	3	Zero terminated string of 13 ascii characters	14
PARAM_TYPE_UINT32	4	Unsigned 32 bit integer (0 to 4,294,967,295)	4
PARAM_TYPE_BOOLEAN	5	Boolean(0 to 1)	1
PARAM_TYPE_INT8	6	Signed 8 bit integer (-127 to 128)	1
PARAM_TYPE_BRANCH	7	Parameter Branch	N/A
PARAM_TYPE_INT16	8	Signed 16 bit integer (-32,767 to 32,768)	2
PARAM_TYPE_CSTR20	9	Zero terminated string of 20 ascii characters	21

Data:

The data value transmitted is dependent on the ParamType, as described above. The CurrentValue is always packed starting at the CurrentValue [0] byte in the packet. For multi-byte data, the

values are packed LSB first(CurrentValue [0]) to MSB(CurrentValue [0+(num bytes-1)]). For example: Setting a given signed 16 bit parameter to a value of -300 the data array would be packed as follows:

Data[0] = 0xd4
Data[1] = 0xfe
Data[2 - 13] = don't care.

If a parameter's current value is a signed 16 bit parameter with a value of -3 the data array would be packed as follows:

Data[0] = 0xfd
Data[1] = 0xff
Data[2 - 13] = don't care.

All signed values are in the 2's compliment format.

Max Value:

This is a 16 bit value representing the maximum value for a parameter. Parameter values exceeding the maximum will be limited to the maximum. This may be a signed or unsigned value depending on the Parameter Type.

Min Value:

This is a 16 bit value representing the minimum value for a parameter. Parameter values exceeding the minimum will be limited to the minimum. . This may be a signed or unsigned value depending on the Parameter Type.

Parameter Path:

This is a zero terminated ASCII character string describing the parameter's name and path in the units parameter tree structure.

Read Only:

Data Type: Boolean
TRUE: Parameter is read only
FALSE: Parameter is writeable

6.3.24 SDP-5 Set Parameter Value by Id

SDP-5 Set Parameter by Id command sets the parameter value equal to the value sent in the command packet and then runs the appropriate functional changes associated with changing the given parameter.

6.3.24.1 Command Packet Description

Application Header:		
Command	MC_CMD_SET_SYS_PARAM_VALUE_BY_ID	0x36
Data Count	24	0x18
Application Data:		
Data[0]	ParamId(LSB)	nn
Data[1]	ParamId(MSB)	nn
Data[2]	ParamType	nn
Data[3-23]	Value[0 -20]	nn nn nn...

6.3.24.2 Data Description

ParamId:

Data Type: Unsigned 16 bit Integer

Max Value: Max Parameter Count as reported by the SDP-5 Unit Configuration Response Packet in 6.3.26.2

ParamType:

Param Type Name	Param Type ID	Type Description	Data Size (Bytes)
PARAM_TYPE_UINT8	0	Unsigned 8 bit integer(0 to 255)	1
PARAM_TYPE_UINT16	1	Unsigned 8 bit integer(0 to 65535)	2
PARAM_TYPE_CSTR8	2	Zero terminated string of 8 ascii characters	9
PARAM_TYPE_CSTR13	3	Zero terminated string of 13 ascii characters	14
PARAM_TYPE_UINT32	4	Unsigned 32 bit integer (0 to 4,294,967,295)	4
PARAM_TYPE_BOOLEAN	5	Boolean (0 to 1)	1
PARAM_TYPE_INT8	6	Signed 8 bit integer (-127 to 128)	1
PARAM_TYPE_BRANCH	7	Parameter Branch	N/A
PARAM_TYPE_INT16	8	Signed 16 bit integer (-32,767 to 32,768)	2
PARAM_TYPE_CSTR20	9	Zero terminated string of 20 ascii characters	21

Value:

The data value transmitted is dependent on the ParamType, as described above. The Data Value is always packed starting at the Value[0] byte in the packet. For multi-byte data, the values are packed LSB first(Value[0]) to MSB(Value[0+(num bytes-1)]). For example: Setting a given signed 16 bit parameter to a value of -300 the data array would be packed as follows:

Value[0] = 0xd4

Value[1] = 0xfe

Value[2 - 13] = don't care.

All signed values are in the 2's compliment format.

6.3.24.3 Data Validation:

The ParamId must be a valid Parameter. The ParamType must be valid for the given ParamId. If either of these condition is not true the SDP-5 will respond with a NAK packet and error code DC_INVALID_PARAM_ID. The data value size cannot exceed the size of a given data type. A value that does exceed the size of a give data type will be truncated to the appropriate size. The ParamType transmitted must match the ParamType for the Parameter being transmitted, as per the Parameter Definition as transmitted by the MC_SYS_PARAM_DEF_PKT. If the types do not match The SDP-5 will transmit a NAK packet with a DC_INVALID_INPUT error code. The SDP-5 will transmit a NAK packet with a DC_ERR_READ_ONLY error code for read only parameters.

6.3.25 SDP-5 Set Parameter Value by Id, No Run

SDP-5 Set Parameter by Id command sets the parameter value equal to the value sent in the command packet and does not run the appropriate functional changes associated with changing the given parameter.

6.3.25.1 Command Packet Description

Application Header:		
Command	MC_CMD_SET_SYS_PARAM_VALUE_BY_ID_NO_RUN	0x37
Data Count	24	0x18
Application Data:		
Data[0]	ParamId(LSB)	nn
Data[1]	ParamId(MSB)	nn
Data[2]	ParamType	nn
Data[3-23]	Value[0 -20]	nn nn nn...

6.3.25.2 Data Description

Same as [Paragraph 6.3.24.2](#)

6.3.26 SDP-5 Get Unit Configuration

Request to SDP-5 for its current unit configuration. SDP-5 will respond with “Unit Configuration Packet”. The HOST should use this information to determine if any information saved by the HOST is current.

6.3.26.1 Command Packet Description

Application Header:		
Command	MC_CMD_GET_CONFIG	0x38
Data Count	0	0x00
Application Data:		
	N/A	

6.3.26.2 SDP-5 Unit Configuration Response Packet

Application Header:		
Command	MC_RESP_UNIT_CONFIG	0x91
Data Count	30	0x1E
Application Data:		
Data[0]	ProductId	nn
Data[1]	Software Type	nn
Data[2]	Software Level	nn
Data[3]	Software Major Revision	nn
Data[4]	Software Minor Revision	nn
Data[5]	Protocol Major Revision	nn
Data[6]	Protocol Minor Revision	nn
Data[7]	Parameter Count Low(LSB)	nn
Data[8]	Parameter Count High(MSB)	nn
Data[9]	Effect Count	nn
Data[10]	TimeStamp[0]	ch
Data[11]	TimeStamp[1]	ch
Data[12]	TimeStamp[2]	ch
Data[13]	TimeStamp[3]	ch
Data[14]	TimeStamp[4]	ch
Data[15]	TimeStamp[5]	ch
Data[16]	TimeStamp[6]	ch
Data[17]	TimeStamp[7]	ch
Data[18]	TimeStamp[8]	ch
Data[19]	TimeStamp[9]	ch
Data[20]	TimeStamp[10]	ch
Data[21]	TimeStamp[11]	ch
Data[22]	TimeStamp[12]	ch
Data[23]	TimeStamp[13]	ch
Data[24]	TimeStamp[14]	ch
Data[25]	TimeStamp[15]	0x00
Data[26]	SerialNumber(LSB)	nn
Data[27]	SerialNumber	nn
Data[28]	SerialNumber	nn
Data[29]	SerialNumber(MSB)	nn

6.3.26.3 Data Description

ProductId: This unsigned 8 bit value describes the product.

Product ID	
Lexicon DC-2	1
Lexicon MC-1	2
JBL Synthesis SDP-3	3
Lexicon MC-12	4
JBL Synthesis SDP-40	5
Lexicon MC-8	6
JBL Synthesis SDP-5	7

Software Type: An unsigned 8 bit value indicating the current configuration of the unit's software. The following table shows the values assigned to the available types:

SW Type	
THX	1
AC3	2
DTS	3
COMPLETE	4
BOOTROM	5

Software Level: The following table shows the values assigned to the possible software levels:

SW Level	
RELEASED	0
PRE_ALPHA	1
ALPHA	2
BETA	3
GAMMA	4
UNSUPPORTED	5

*Note: SW level indicates the status of the SDP-5 internal application software.

Software Major Revision: An unsigned 8 bit integer value indicating the unit's major software version. The host should use this information to determine if new effects, effect parameters, or system parameters have been added or removed.

Software Minor Revision: An unsigned 8 bit integer value indicating this units minor software version. Indicates the units software operation has changed but effects, effect parameters, or system parameters have not changed.

Protocol Major Revision: An unsigned 8 bit integer value indicating the serial communication protocol major version. The host should use this value to determine if new commands, notifications, or response packets have been added or deleted from this specification.

Protocol Minor Revision: An unsigned 8 bit integer value indicating the serial communication protocol minor version. The host should use this value to determine if the existing commands, notifications, or response packets have changed in this specification

Parameter Count: An unsigned 16 bit integer value indicating the maximum number of parameters for this version of software. All Parameters are sequential ordered with in the unit so cycling from ParamId 0 to ParamId = Parameter Count -1 allows for the host system to learn the Parameter definitions for all Parameters defined for a given software version. The 16 bit value is packed LSB followed by the MSB.

Total Number of Effects: An unsigned 8 bit integer value indicating the maximum number of effects available for this version of software.

TimeStamp: Is a null terminated ASCII text string describing the build date and time of the current software build. The Format of this text string is:
 “yy/mm/dd(sp)hh:mm”
 yy- is the last two digits of the year (i.e. year 2001=01, year 2002 = 02)
 mm - is the month
 dd- is the day
 (sp) - is an ASCII space character (0x20)
 hh - is the hour
 mm - is the minute

SerialNumber: The Serial Number is an unsigned 32 bit integer holding the unique value of the current unit.

6.3.27 SDP-5 Send IR Command

This command allows the HOST to transmit IR command key codes to the SDP-5.

6.3.27.1 Command Packet Description

Application Header:		
Command	MC_CMD_IR	0x39
Data Count	1	0x01
Application Data:		
Data[0]	KeyCode	nn

6.3.27.2 Data Description

KeyCode:

Data Type: Unsigned 8 bit integer.

Valid Values: [Appendix D SDP-5 IR-Codes](#)

6.3.27.3 SDP-5 Response

The KeyCode is processed as a valid IR code. No acknowledgment will be sent from SDP-5.

6.3.27.4 Data Validation

The KeyCode data will be verified as a legal IR code. If the Code is not valid the SDP-5 will not respond.

6.3.28 SDP-5 Get Parameter Value by Id

Request to SDP-5 for the current value of a given parameter. The SDP-5 will respond with a “Parameter Value Packet”.

6.3.28.1 Command Packet Description

Application Header:		
Command	MC_CMD_GET_PARAM_VALUE_BY_ID	0x3A
Data Count	2	0x02
Application Data:		
Data[0]	ParamId (LSB)	nn
Data[1]	ParamId (MSB)	nn

6.3.28.2 Data Description

ParamId:

Data Type: Unsigned 16 bit integer.

Max: Max Parameter Count as reported by the SDP-5 Unit Configuration
Response Packet in 7.3.39.2

6.3.28.3 Data Validation

If ParamId exceeds the its maximum value, the SDP-5 will ignore the command and transmit a DC_NAK command with an error code DC_INVALID_PARAM_ID.

6.3.28.4 SDP-5 Value String Response Packet

Application Header:		
Command	MC_RESP_PARAM_VALUE	0x92
Data Count	24	0x18
Application Data:		
Data[0]	ParamId (LSB)	nn
Data[1]	ParamId (MSB)	nn
Data[2]	ParamType	nn
		nn nn
Data[3-23]	Value[0 -20]	nn...

6.3.28.5 Data Description

Same as [Paragraph 6.3.24.2](#)

6.3.29 SDP-5 Set Parameter Notification by Id

Request to SDP-5 to enable or disable transmission of the SDP-5 parameter change notification for a given parameter.

6.3.29.1 Command Packet Description

Application Header:		
Command	MC_CMD_SET_PARAM_NOTIFICATION_BY_ID	0x3B
Data Count	3	0x03
Application Data:		
Data[0]	ParamId (LSB)	nn
Data[1]	ParamId (MSB)	nn
Data[2]	Enable/Disable	nn

6.3.29.2 Data Description

ParamId:

Data Type: Unsigned 16 bit integer.

Max: Max Parameter Count as reported by the SDP-5 Unit Configuration
Response Packet in 7.3.39.2

Enable/Disable:

Data Type: Boolean

TRUE: Enable transmission of parameter notification

FALSE: Disable transmission of parameter notification

6.3.29.3 Data Validation

If ParamId exceeds the its maximum value, the SDP-5 will ignore the command and transmit a DC_NAK command with an error code DC_INVALID_PARAM_ID.

6.3.29.4 SDP-5 Response

If a parameter has been enabled for notification the SDP-5 will transmit its current value whenever it has been changed due to any user or system action. For the details of the SDP-5 notification packet, see [6.1.5 \(SDP-5 Parameter Notification By Id\)](#).

6.3.30 SDP-5 Parameter Get Value String by Id

Request to SDP-5 for the string representation of a given value for a given parameter. The SDP-5 will respond with a “Value String Response Packet”.

6.3.30.1 Command Packet Description

Application Header:		
Command	MC_CMD_PARAM_GET_VALUE_STRING_BY_ID	0x3C
Data Count	23	0x17
Application Data:		
Data[0]	ParamId (LSB)	nn
Data[1]	ParamId (MSB)	nn
Data[2] - Data[22]	Value[0] - Value[20]	nn nn nn ..

6.3.30.2 Data Description

ParamId:

Data Type: Unsigned 16 bit integer.

Max: Max Parameter Count as reported by the SDP-5 Unit Configuration Response Packet in 7.3.39.2

Value:

See [SDP-5 Value Union Description](#).

6.3.30.3 Data Validation

If ParamId exceeds the its maximum value, the SDP-5 will ignore the command and transmit a DC_NAK command with an error code DC_INVALID_PARAM_ID.

6.3.30.4 SDP-5 Value String Response Packet

Application Header:		
Command	MC_RESP_VALUE_STRING	0x93
Data Count	Number of Characters in Value String + 1	nn
Application Data:		
Data[0] - Data[20]	Value String	ch ch ch ... 0x00

6.3.30.5 Data Description

Value String:

Data Type: Null (0x00) terminated ASCII string.
 Max Length: 21 (20 characters plus terminating Null)

6.3.31 SDP-5 Clear All Parameter Notifications

Request to the SDP-5 to disable all SDP-5 parameter notifications.

6.3.31.1 Command Packet Description

Application Header:		
Command	MC_CMD_CLEAR_ALL_PARAM_NOTIFICATIONS	0x3D
Data Count	0	0x00
Application Data:		
	N/A	

6.3.32 SDP-5 Get System Status

Request to SDP-5 for its current system status. SDP-5 will respond with “System Status Packet”.

6.3.32.1 Command Packet Description

Application Header:		
Command	MC_CMD_GET_SYS_STATUS	0x3E
Data Count	0	0x00
Application Data:		
	N/A	

6.3.32.2 System Status Response Packet

Application Header:		
Command	MC_RESP_SYS_STATUS	0x94
Data Count	10	0x0A
Application Data:		
Data[0]	System Volume	nn
Data[1]	Current Input	nn
Data[2]	Current Effect Id	nn
Data[3]	Current Input Sample Rate	nn
Data[4]	Current Input Format	nn
Data[5]	Mute Active	nn
Data[6]	Effect Bypass	nn
Data[7]	Left/Right Balance	nn
Data[8]	Front/Back Balance	nn
Data[9]	Video Sync	nn

6.3.32.3 Data Description

System Volume:

Data Type: Signed 8 bit integer (2's compliment)
 Max: +12 (0x0C) (12 dB)
 Min: -80 (0xB0) (-80 dB)

Current Input:

Data Type: Unsigned 8 bit integer
 Definition/Conversion: [Appendix F SDP-5 Input Ids](#)

Current Effect Id:

Data Type: Unsigned 8 bit integer
 Definition/Conversion: [Appendix J SDP-5_Mode Ids](#)

Current Input Sample Rate:

Data Type: Unsigned 8 bit integer.

SAMPLE RATE	
RATE_UNKNOWN	0
RATE_44	1
RATE_48	2
RATE_88	3
RATE_96	4

Current Input Format:

Data Type: Unsigned 8 bit integer.

DATA STREAM TYPE	
DATA_TYPE_UNKNOWN	0
DATA_TYPE_BYPASS	1
DATA_TYPE_ANALOG	2
DATA_TYPE_PCM	3
DATA_TYPE_DD	4
DATA_TYPE_DTS	5
DATA_TYPE_NOISE	6

Mute Active:

Data Type: Boolean.
 TRUE: System Mute is Active
 FALSE: System is unmuted.

Effect Bypass:

Data Type: Boolean
 TRUE: Effect Bypass is Active
 FALSE: Effect Bypass is Inactive

Left/Right Balance:

Data Type: Signed 8 bit integer (2's compliment)
 Max: 16 (0x10) (Full Right)
 Min: -16 (0xF0) (Full Left)

Front/Back Balance:

Data Type: Signed 8 bit integer (2's compliment)
 Max: 16 (0x10) (Full Front)

Min: -16 (0xF0) (Full Back)

Video Sync:

Data Type: Boolean.
 TRUE: SDP-5 has detected Video Sync for current video input
 FALSE: SDP-5 can not detect Video Sync for the current video input

6.3.33 SDP-5 Get Zone Status

This command is a request to SDP-5 for current Zone 2 Status. SDP-5 will respond with “Zone2 Status Packet”.

6.3.33.1 Command Packet Description

Application Header:		
Command	MC_GET_REC_ZONE2_STATUS	0x3F
Data Count	0	0x00
Application Data:		
	N/A	

6.3.33.2 Zone2 Status Response Packet

Application Header:		
Command	MC_RESP_REC_ZONE2_STATUS	0x95
Data Count	5	0x05
Application Data:		
Data[0]	Zone2 Volume	nn
Data[1]	Assigned Zone 2 Input	nn
Data[2]	Reserved For Future Use	nn
Data[3]	Zone2 Mute Active	nn
Data[4]	Zone2 Balance	nn

6.3.33.3 Data Description

Zone2 Volume:

Data Type: Signed 8 bit integer (2's compliment)
 Max: +12 (0x0C) (12 dB)
 Min: -80 dB (0xB0) (-80 dB)

Assigned Zone 2 Input:

Indicates the Zone 2 input that is currently assigned for the zone 2 outputs.
 Data Type: Unsigned 8 bit integer.
 Definition/Conversion: [Appendix F SDP-5 Input Ids](#)

Zone2 Mute Active:

Data Type: Boolean.
 TRUE: Zone2 Outputs are active.
 FALSE: Zone 2 Outputs are not active.

Zone 2 Balance:

Data Type:	Signed 8 bit integer (2's compliment)
Max:	16 (0x10) (Full Right)
Min:	-16 (0xF0) (Full Left)

6.3.34 SDP-5 Set System Volume

This command is a request to the SDP-5 to set the system volume with the value in this packet.

6.3.34.1 Command Packet Description

Application Header:		
Command	MC_CMD_SET_SYS_VOLUME	0x40
Data Count	1	0x01
Application Data:		
Data[0]	Value	nn

6.3.34.2 Data Description

Value:

Data Type:	Signed 8 bit integer (2's compliment)
Max:	+12 (0x0C) (12 dB)
Min:	-80 (0xB0) (-80 dB)

6.3.34.3 SDP-5 Response

The SDP-5 will assign the value from the packet to the system volume.

6.3.34.4 Data Validation

If a value is passed that exceeds the maximum value of that parameter the SDP-5 will ignore the command and transmit a DC_NAK command with an error code DC_INVALID_DATA.

6.3.35 SDP-5 Set Main Balance

Commands SDP-5 to set the system balance to the value in this packet.

6.3.35.1 Command Packet Description

Application Header:		
Command	DC_CMD_SET_SYS_BALANCE	0x41
Data Count	1	0x01
Application Data:		
Data[0]	Value	nn

6.3.35.2 Data Description

Value:

Data Type: Signed 8 bit integer (2's compliment)
 Max: +16 (0x10) (Full Right)
 Min: -16 (0xF0) (Full Left)

6.3.35.3 SDP-5 Response

The SDP-5 will assign the value from the packet to the system balance.

6.3.35.4 Data Validation

If a value is passed that exceeds the maximum value of that parameter the SDP-5 will ignore the command and transmit a DC_NAK command with an error code DC_INVALID_DATA.

6.3.36 SDP-5 Set Front/Back Balance

Commands SDP-5 to set the front/back balance to the value in this packet.

6.3.36.1 Packet Description

Application Header:		
Command	MC_CMD_SET_FRONT_BACK_BALANCE	0x42
Data Count	1	0x01
Application Data:		
Data[0]	Value	nn

6.3.36.2 Data Description

Value:

Data Type: Signed 8 bit integer (2's compliment)
 Max: +16 (0x10) (Full Front)
 Min: -16 (0xF0) (Full Back)

6.3.36.3 SDP-5 Response

The SDP-5 will assign the value from the packet to the front/back balance.

6.3.36.4 Data Validation

If a value is passed that exceeds the maximum value of that parameter the SDP-5 will ignore the command and transmit a NAK command with an error code DC_INVALID_DATA.

6.3.37 SDP-5 Set Active Effect by Id

This command requests the SDP-5 to set the active effect to the value in this packet.

6.3.37.1 Command Packet Description

Application Header:		
Command	MC_CMD_SET_EFFECT	0x43
Data Count	1	0x01
Application Data:		
Data[0]	EffectId	nn

6.3.37.2 Data Description

EffectId:

Data Type: Unsigned 8 bit integer

Definition/Conversion: [Appendix I SDP-3 to SDP-5 Effect ID Map](#).

6.3.37.3 SDP-5 Response

The SDP-5 will load the desired effect.

6.3.37.4 Data Validation

If a value is passed that exceeds the maximum value of that parameter the SDP-5 will ignore the command and transmit a NAK command with an error code DC_INVALID_DATA.

6.3.38 SDP-5 Set Zone2 Volume

Commands SDP-5 to set the Zone 2 volume with the value in this packet.

6.3.38.1 Command Packet Description

Application Header:		
Command	MC_CMD_SET_ZONE2_VOLUME	0x45
Data Count	1	0x01
Application Data:		
Data[0]	Value	nn

6.3.38.2 Data Description

Value:

Data Type: Signed 8 bit integer (2's compliment)

Max: +12 (0x0C) (12dB)

Min: -80 (0xB0) (-80 dB)

6.3.38.3 SDP-5 Response

The SDP-5 will assign the value from the packet to the Zone 2 volume.

6.3.38.4 Data Validation

If a value is passed that exceeds the maximum value of that parameter the SDP-5 will ignore the command and transmit a NAK command with an error code DC_INVALID_DATA.

6.3.39 SDP-5 Set Zone2 Left/Right Balance

Commands SDP-5 to set the Zone 2 balance to the value in this packet.

6.3.39.1 Packet Description

Application Header:		
Command	MC_CMD_SET_ZONE2_BALANCE	0x46
Data Count	1	0x01
Application Data:		
Data[0]	Value	nn

6.3.39.2 Data Description

Value:

Data Type:	Signed 8 bit integer (2's compliment)
Max:	+16 (0x10) (Full Right)
Min:	-16 (0xF0) (Full Left)

6.3.39.3 SDP-5 Response

The SDP-5 will assign the value from the packet to the Zone 2 balance.

6.3.39.4 Data Validation

If a value is passed that exceeds the maximum value of that parameter the SDP-5 will ignore the command and transmit a NAK command with an error code DC_INVALID_DATA.

6.3.40 SDP-5 Get Input Name by Id

This command is a request to SDP-5 for the custom input name. SDP-5 will respond with "Input Name Packet".

6.3.40.1 Command Packet Description

Application Header:		
Command	MC_CMD_GET_INPUT_NAME	0x47
Data Count	1	0x01
Application Data:		
Data[0]	InputId	nn

6.3.40.2 Data Description

InputId:

Data Type:	Unsigned 8 bit Integer
Definition/Conversion:	Appendix F SDP-5Input Ids

6.3.40.3 Data Validation:

The InputId must be a valid Input number. If it is not the SDP-5 will respond with a NAK packet and error code DC_INVALID_INPUT.

6.3.40.4 Input Name Response Packet

Application Header:		
Command	MC_RESP_INPUT_NAME	0x96
Data Count	Number of Characters in InputName + 2	nn
Application Data:		
Data[0]	InputId	nn
Data[1]- Data[DataCount-1]	InputName	ch ch ch ... 0x00

6.3.40.5 Data Description

InputId:

Data Type: Unsigned 8 bit Integer
 Definition/Conversion: [Appendix F SDP-5 Input Ids](#)

InputName:

Data Type: Null (0x00) terminated ASCII character string.
 Max Length: INPUT_NAME_LENGTH defined in [Appendix G Protocol Constants](#).

6.3.41 SDP-5 Set Input Name by Id

Sets an Input Name to the transmitted value for a given input.

6.3.41.1 Command Packet Description

Application Header:		
Command	MC_CMD_SET_INPUT_NAME	0x48
Data Count	Number of characters in InputName + 2	nn
Application Data:		
Data[0]	InputId	0 to 7
Data[1]-Data[DataCount-1]	InputName	ch ch ch ... 0x00

6.3.41.2 Data Description

InputId:

Data Type: Unsigned 8 bit Integer
 Description/Conversion: [Appendix F SDP-5 Input Ids](#)

InputName:

Data Type: Null (0x00) terminated ASCII character string.
 Max Length: INPUT_NAME_LENGTH defined in [Appendix G Protocol Constants](#).

6.3.41.3 SDP-5 Response

SDP-5 will copy the InputName to the given input.

6.3.41.4 Data Validation:

The InputId must be a valid Input Id. If it is not the SDP-5 will respond with a NAK packet and error code DC_INVALID_INPUT. If the InputName string exceeds the INPUT_NAME_LENGTH, the SDP-5 will truncate the string to the INPUT_NAME_LENGTH.

Appendix A Command Codes

Notifications:		
	DC_NO_CMD	0x00
	DC_WAKEUP	0x01
	DC_SLEEP	0x02
	DC_FPD	0x03
	DC_PARAM_CHG_MSG	0x04
	MC_PARAM_NOTIFICATION_BY_ID	0x05

Host Commands:		
	DC_CMD_RESET	0x10
	HOST_WAKEUP	0x11
	HOST_SLEEP	0x12
	DC_CMD_RESTORE_DEFAULTS	0x13
	DC_CMD_IR	0x14
	DC_CMD_GET_CONFIG	0x15
	DC_CMD_GET_SYS_STATUS	0x16
	DC_CMD_GET_REC_STATUS	0x17
	DC_CMD_GET_SYS_PARAM_BY_ID	0x18
	DC_CMD_GET_SYS_PARAM_BY_NAME	0x19
	DC_CMD_GET_SYS_PARAM_VALUES	0x1A
	DC_CMD_GET_EFFECT	0x1B
	DC_CMD_GET_EFFECT_PARAM_DEF	0x1C
	DC_CMD_GET_EFFECT_PARAM_VALUES	0x1D
	DC_CMD_SET_SYS_PARAM_VALUES	0x1E
	DC_CMD_SET_EFFECT_PARAM_VALUES	0x1F
	DC_CMD_SET_EFFECT_NAME	0x20
	DC_CMD_SET_SYS_VOLUME	0x21
	DC_CMD_SET_SYS_BALANCE	0x22
	DC_CMD_SET_FRONT_BACK_BALANCE	0x23
	DC_CMD_SET_EFFECT	0x24
	DC_CMD_SET_REC_INPUT	0x25
	DC_CMD_CLEAR_REC_INPUT	0x26
	DC_CMD_SET_ZONE2_VOLUME	0x27
	DC_CMD_SET_ZONE2_BALANCE	0x28
	DC_CMD_GET_FPD_CTRL	0x29
	DC_CMD_SET_FPD_CTRL	0x2A
	DC_CMD_GET_CUST_NAME	0x2B
	DC_CMD_SET_CUST_NAME	0x2C
	DC_CMD_GET_INPUT_NAME	0x2D
	DC_CMD_SET_INPUT_NAME	0x2E
	DC_CMD_GET_COM_CONFIG	0x2F
	DC_CMD_SET_COM_CONFIG	0x30
	DC_CMD_SET_MUTE	0x31
	DC_CMD_SET_OUTPUT_ADJ	0x32
	DC_CMD_SEND_DISPLAY_STR	0x33

	MC_CMD_GET_SYS_PARAM_BY_ID	0x35
	MC_CMD_SET_SYS_PARAM_VALUE_BY_ID	0x36
	MC_CMD_SET_SYS_PARAM_VALUE_BY_ID_NO_RUN	0x37
	MC_CMD_GET_CONFIG	0x38
	MC_CMD_IR	0x39
	MC_CMD_GET_PARAM_VALUE_BY_ID	0x3A
	MC_CMD_SET_PARAM_NOTIFICATION_BY_ID	0x3B
	MC_CMD_PARAM_GET_VALUE_STRING_BY_ID	0x3C
	MC_CMD_CLEAR_ALL_PARAM_NOTIFICATIONS	0x3D
	MC_CMD_GET_SYS_STATUS	0x3E
	MC_GET_REC_ZONE2_STATUS	0x3F
	MC_CMD_SET_SYS_VOLUME	0x40
	MC_CMD_SET_SYS_BALANCE	0x42
	MC_CMD_SET_EFFECT	0x43
	MC_CMD_SET_REC_INPUT	0x44
	MC_CMD_SET_ZONE2_VOLUME	0x45
	MC_CMD_SET_ZONE2_BALANCE	0x46
	MC_CMD_GET_INPUT_NAME	0x47
	MC_CMD_SET_INPUT_NAME	0x48

Responses		
	DC_RESP_UNIT_CONFIG	0x80
	DC_RESP_SYS_STATUS	0x81
	DC_RESP_REC_ZONE2_STATUS	0x82
	DC_RESP_SYS_PARAM_DEF	0x83
	DC_RESP_SYS_PARAM_VALUES	0x84
	DC_RESP_EFFECT_DEF	0x85
	DC_RESP_EFFECT_PARAM_DEF	0x86
	DC_RESP_EFFECT_PARAM_VALUES	0x87
	DC_RESP_FPD_CTRL_STATUS	0x88
	DC_RESP_CUST_NAME	0x89
	DC_RESP_INPUT_NAME	0x8A
	DC_RESP_PEEK_VALUE	0x8B
	DC_RESP_COM_CONFIG	0x8C
	MC_RESP_SYS_PARAM_DEF	0x8F
	MC_RESP_UNIT_CONFIG	0x91
	MC_RESP_PARAM_VALUE	0x92
	MC_RESP_VALUE_STRING	0x93
	MC_RESP_SYS_STATUS	0x94
	MC_RESP_REC_ZONE2_STATUS	0x95
	MC_RESP_INPUT_NAME	0x96

Acknowledgments		
	DC_ACK	0xE0
	DC_NAK	0xE1

Appendix B Error Codes

Error	Code(Hex)
NO_ACK	0x00
DC_NO_ERROR	0x01
DC_ERR_PARITY	0x02
DC_ERR_FRAMING	0x03
DC_ERR_OVERRUN	0x04
DC_ERR_INVALID_PACKET	0x05
DC_ERR_TIME_OUT	0x06
DC_ERR_BUFFER_FULL	0x07
DC_INVALID_COUNT	0x10
DC_INVALID_CMD	0x11
DC_INVALID_DATA	0x12
DC_INVALID_ADDRESS	0x13
DC_INVALID_EFFECT_ID	0x14
DC_INVALID_PARAM_ID	0x15
DC_INVALID_NAME	0x16
DC_INVALID_INPUT	0x17
DC_ERR_READ_ONLY	0x18

Appendix C SDP-3 IR-Codes

SDP-3 Function	Mapped to SDP-5 Function	Hex Code	SDP-3 Shift Functions	Mapped to SDP-5 Function	Hex Code	SDP-3 Rec Function	Mapped to SDP-5 Function	Hex Code
Off	STANDBY	19	Trigger Off	TRIGGER1_OFF	99	Zone-2: Off	ZONE_OFF	59
On	ON	18	Trigger On	TRIGGER1_ON	98	Zone-2: On	ZONE_DVD_2	58
OSD Off	OSD	02	Menu Back Off	BLUE	82	Reserved		42
FrontPanel Off	FP	03	reserved		83	Reserved		43
LIGHT		N/A			N/A			N/A
FrontPanel On	FP	04	reserved		84	Reserved		44
OSD On	OSD	05	Menu Back On	BLUE	85	Status Menu	INPUT_STATUS	45
Menu Up	UP_ARROW	01	Fade Front		81	Reserved		41
Done	LEFT_ARROW_DONE	0A	Balance Left	BAL_LEFT	8A	Z-2: Bal Left	ZONE_BAL_LEFT	4A
SPARE		06	SPARE		86	SPARE		46
Select	RIGHT_ARROW_SELECT	08	Balance Right	BAL_RIGHT	88	Z-2: Bal Right	ZONE_BAL_RIGHT	48
Menu Down	DN_ARROW	1D	Fade Rear	FADER_REAR	9D	Reserved		5D
Mute	MUTE	15	Full Mute	FULL_MUTE	95	Z-2: Mute	ZONE_MUTE	55
Effect +	MODE_INCR	1A	Center Bal/Fad	BAL_CENTER	9A	Lock the LOCK		5A
Effect -	MODE_DECR	1B	EQ Off	EQ_OFF	9B	Reserved		5B
Volume +	VOL_INCR	17	Volume +5dB	VOL_03DB	97	Z-2: Volume +	ZONE_VOL_INCR	57
Volume -	VOL_DECR	16	Volume -5dB	VOL_N03DB	96	Z-2: Volume -	ZONE_VOL_DECR	56
VCR	MAIN_VCR	13	Bass +	BASS_INCR	93	R/Z-2: VCR	ZONE_VCR	53
DVD	MAIN_DVD_1	12	Treble +	TREBLE_INCR	92	R/Z-2: DVD	ZONE_DVD_1	52
V-DISC	MAIN_DVD_2	11	Tilt +	TILT_INCR	91	R/Z-2: V-DISC	ZONE_DVD_2	51
TV	MAIN_TV	10	Loudness On		90	R/Z-2: TV	ZONE_TV	50
AUX	MAIN_AUX	0F	Bass -	BASS_DECR	8F	R/Z-2: AUX	ZONE_AUX	4F
CD	MAIN_CD	0E	Treble -	TREBLE_DECR	8E	R/Z-2: CD	ZONE_CD	4E
TUNER	MAIN_TUNER	0D	Tilt -	TILT_DECR	8D	R/Z-2: TUNER	ZONE_TUNER	4D
TAPE	MAIN_SAT	0C	Loudness Off		8C	R/Z-2: TAPE	ZONE_SAT	4C
Dolby	DOLBY_LOGO	20	Nightclub		A0	Z-2 Vol: -30dB	ZONE_VOL_N30DB	60
THX	THX_LOGO	21	Concert Hall		A1	Z-2 Vol: -20dB	ZONE_VOL_N30DB	61
Logic7	LOGIC7_LOGO	22	Church		A2	Z-2 Vol: -10dB	ZONE_VOL_N30DB	62
dtS	DTS_LOGO	23	Cathedral		A3	Z-2 Vol: +00dB	ZONE_VOL_00DB	63
2-Chan On/Off	MAIN_2_CHANNEL	24	Expansion Ports*		A4	Volume: -30dB	VOL_N30DB	64
Party		25	Panorama		A5	Volume: -20dB	VOL_N30DB	65
TV Matrix	TV_L_LOGO	26	Mono Logic		A6	Volume: -10dB	VOL_N30DB	66
Music	MUSIC	27	Music Surround	MUSIC	A7	Volume: +00dB	VOL_00DB	67
SPARE		28	SPARE		A8	SPARE		68
SPARE		29	SPARE		A9	SPARE		69
SPARE		2A	SPARE		AA	SPARE		6A
SPARE		2B	SPARE		AB	SPARE		6B
SPARE		2C	SPARE		AC	SPARE		6C
SPARE		2D	SPARE		AD	SPARE		6D
SPARE		2E	SPARE		AE	SPARE		6E
SPARE		2F	SPARE		AF	SPARE		6F
Null		30	null		B0	null		70

Appendix D SDP-5 IR Codes

KEY						
	FUNCTION	DATA (hex)	FUNCTION	DATA (hex)	FUNCTION	DATA (hex)
1	STANDBY	0x19	MAIN_OFF	0x99	ZONE_OFF	0x59
2	ON	0x18	Reserved	0x98	Reserved	0x58
3	FP	0x04	BAL_CENTER	0x84	ZONE_BAL_CENTE R	0x44
4	BLUE	0x03	TRIGGER1 OFF	0x83	EQ OFF	0x43
5	LIGHT	None	LIGHT	None	LIGHT	None
6	OSD	0x02	TRIGGER1 ON	0x82	Reserved	0x42
7	STAT	0x1C	INPUT STATUS	0x9C	ZONE STATUS	0x5C
8	UP ARROW	0x01	FADER FRONT	0x81	SUB ADJ INCR	0x41
9	LEFT ARROW DONE	0x0A	BAL LEFT	0x8A	ZONE BAL LEFT	0x4A
10	Reserved		Reserved		Reserved	
11	RIGHT_ARROW_SELECT	0x08	BAL_RIGHT	0x88	ZONE_BAL_RIGHT	0x48
12	DN ARROW	0x1D	FADER REAR	0x9D	SUB ADJ DECR	0x5D
13	MUTE	0x15	FULL MUTE	0x95	ZONE MUTE	0x55
14	MODE INCR	0x1A	VOL N15DB	0x9A	ZONE VOL N15DB	0x5A
15	MODE DECR	0x1B	VOL N30DB	0x9B	ZONE VOL N30DB	0x5B
16	VOL INCR	0x17	VOL 03DB	0x97	ZONE VOL INCR	0x57
17	VOL DECR	0x16	VOL N03DB	0x96	ZONE VOL DECR	0x56
18	MAIN DVD 1	0x20	BASS INCR	0xA0	ZONE DVD 1	0x60
19	MAIN DVD 2	0x21	TREBLE INCR	0xA1	ZONE DVD 2	0x61
20	MAIN SAT	0x24	TILT INCR	0xA4	ZONE SAT	0x64
21	MAIN VCR	0x25	LOUDNESS ON	0xA5	ZONE VCR	0x65
22	MAIN TV	0x23	BASS DECR	0xA3	ZONE TV	0x63
23	MAIN CD	0x26	TREBLE DECR	0xA6	ZONE CD	0x66
24	MAIN TUNER	0x2A	TILT DECR	0xAA	ZONE TUNER	0x6A
25	MAIN AUX	0x2B	LOUDNESS OFF	0xAB	ZONE AUX	0x6B
26	Reserved		Reserved		Reserved	
27	Reserved		Reserved		Reserved	
28	Reserved		Reserved		Reserved	
29	Reserved		Reserved		Reserved	
30	LOGIC7 LOGO	0x0D	PANORAMA	0x8D	Reserved	0x4D
31	DOLBY LOGO	0x0C	DOLBY EX TOGGLE	0x8C	Reserved	0x4C
32	DTS LOGO	0x0F	DTS ES TOGGLE	0x8F	Reserved	0x4F
33	THX LOGO	0x0B	THX EX TOGGLE	0x8B	Reserved	0x4B
34	MUSIC	0x10	MUSIC SURROUND	0x90	Reserved	0x50
35	TV L LOGO	0x0E	MONO LOGIC	0x8E	Reserved	0x4E
36	MAIN TOGGLE 7 5	0x1E	MAIN_SRC MODE	0x9E	Reserved	0x5E
37	MAIN 2 CHANNEL	0x1F	BYPASS	0x9F	Reserved	0x5F
38	Reserved		Reserved		Reserved	
39	Reserved		Reserved		Reserved	
40	Reserved		Reserved		Reserved	
41	Reserved		Reserved		Reserved	

Appendix E SDP-3 Input Id's

Input Name	Input Id
Tape	0
Tuner	1
Cd	2
Aux	3
TV	4
V-Disc	5
DVD	6
VCR	7

Appendix F SDP-5 Input Ids

SDP-5 Input Name	SDP-5 Input Id	Mapped SDP-3 Input Name
OFF	0	N/A
DVD1	1	AUX
DVD2	2	V-DISC
TV	3	TV
SAT	4	AUX
VCR	5	VCR
CD	6	CD
TUNER	7	TUNER
AUX	8	AUX

Appendix G Protocol Constants

Constant	Value (Dec)	Units
FPD_LINE_LENGTH	20	Chars
PARAM_NAME_LENGTH	13	Chars
CUSTOM_NAME_LENGTH	20	Chars
INPUT_NAME_LENGTH	8	Chars
PARAM_PATH_LENGTH	80	Chars
INTER_PACKET_TIME	200	mSec
SOP	0xF1	Hex
EOP	0xF2	Hex

Appendix H SDP-5 to SDP-3 Effect Map

SDP-5 Effect Name	SDP-5 Effect ID	SDP-3 Effect Name
NONE	0	Bypass
N/A	1	Bypass
Internal Noise	2	
L7 Film	3	Logic 7
L7 TV	4	TV Logic
L7 Music	5	Music Logic
2-Ch Surround	6	Music Surround
2-Channel	7	2-Channel
Mono Logic	8	Mono Logic
Mono Surround	9	Mono Logic
Mono	10	Mono Logic
Pro Logic	11	Prologic
Prologic II	12	Prologic
PLII Music	13	Prologic
THX Cinema	14	THX Cinema
Reserved	15	Logic 7
Reserved	16	Music Logic
5.1 L7 Film	17	5.1 Logic 7
5.1 L7 TV	18	5.1 Logic 7
5.1 L7 Music	19	5.1 Music
5.1 THX(ex)	20	THX 5.1
Dolby Digital	21	Dolby Digital
5.1 2-Channel	22	5.1 2-Channel
5.1 Mono Logic	23	Mono Logic
5.1 Mono Surround	24	Mono Logic
5.1 Mono	25	Mono Logic
dts L7 Film	26	dts Logic 7
dts L7 Music	27	dts Music
dts 2-Channel	28	dts 2-Channel
dts Film	29	dts Film
dts THX	30	dts THX 5.1
2ch Analog Bypass	31	Bypass
5.1 Analog Bypass	32	Bypass
External Noise PLII	33	Prologic
External Noise Dolby Digital	34	Dolby Digital
External Noise dts	35	dts Film
Not Available on SDP-5	36	
Not Available on SDP-5	37	
Not Available on SDP-5	38	
Not Available on SDP-5	39	
Not Available on SDP-5	40	
Not Available on SDP-5	41	
Dts THX MUSIC	42	dts THX
5.1 THX MUSIC	43	5.1 THX
Nightclub	44	Nightclub
Concert Hall	45	Concert Hall
Church	46	Church
Cathedral	47	Cathedral
Not Available on SDP-5	48	
L7 Music Surround	49	Music Surround
Panorama	50	Panorama

Appendix I SDP-3 to SDP-5 Effect ID Map

SDP-3 Effect ID	SDP-3 Effect Name	SDP-5 Effect Name
0	Bypass	Analog Bypass
1	Church	Church
2	THX Cinema	PL II THX
3	TV Logic	L7 TV
4	Mono Logic	Mono Logic
5	Panorama	L7 Film
6	Nightclub	Nightclub
7	Prologic	Prologic II
8	Music Logic	L7 Music
9	Party	2-Ch Surround
10	N/A	none
11	N/A	none
12	Concert Hall	Concert Hall
13	Cathedral	Cathedral
14	Music Surround	L7 Music Surround
15	Logic 7	L7 Film
16	2-Channel	2-Channel
17	DD 2.0 Prologic	Prologic II
18	DD 2.0 THX Cinema	PL II THX
19	DD 2.0 Logic 7	L7 Film
20	DD 2.0 Music Surround	L7 Music
21	DD 2.0 2-Channel	2-Channel
22	Dolby Digital	Dolby Digital
23	THX 5.1	5.1 THX
24	5.1 Logic 7	5.1 L7 Film
25	5.1 Music	5.1 L7 Music
26	5.1 2-Channel	5.1 2-Channel
27	dts Film	dts
28	dts THX 5.1	dts THX
29	dts Logic 7	dts L7 Film
30	dts Music	dts L7 Music
31	dts 2-Channel	dts 2-Chan
32	dts 2-Channel	dts
33	N/A	none
34	N/A	none
35	N/A	none
36	N/A	none
37	N/A	none

Appendix J SDP-5 Mode Ids

SDP-5 Mode ID	SDP-5 Mode Name
0	NONE
1	N/A
2	Internal Noise
3	L7 Film
4	L7 TV
5	L7 Music
6	2-Ch Surround
7	2-Channel
8	Mono Logic
9	Mono Surround
10	Mono
11	Pro Logic
12	Prologic II
13	PLII Music
14	THX Cinema
15	Dts Neo6 Film
16	Dts Neo6 Music
17	5.1 L7 Film
18	5.1 L7 TV
19	5.1 L7 Music
20	5.1 THX(ex) Ultra II
21	Dolby Digital(Ex)
22	5.1 2-Channel
23	5.1 Mono Logic
24	5.1 Mono Surround
25	5.1 Mono
26	dts L7 Film
27	dts L7 Music
28	dts 2-Channel
29	dts Film
30	dts THX
31	2ch Analog Bypass
32	5.1 Analog Bypass
33	External Noise PLII
34	External Noise Dolby Digital
35	External Noise dts
36	Not Available
37	Not Available
38	Not Available
39	Not Available
40	Not Available
41	Not Available
42	dts THX Music
43	5.1 THX Music
44	NightClub
42	Concert Hall
43	Church
44	Cathedral
45	L7 Music Surround
46	Panorama

Appendix K Application Notes and Examples

6.4 Box initializations:

6.4.1 SDP-5:

When the SDP-5 is powered on it will initialize the serial port and then transmit the DC_WAKEUP Packet, and look for an ACK from the HOST. Currently, if an ACK is not received, the SDP-5 continues to operate. This message is mostly for the HOST to know if the SDP-5 is in an operational state.

6.4.2 HOST:

When the HOST issues a HOST_WAKEUP Packet the SDP-5 responds with an ACK and then transmits the current FPD buffer with a DC_FPD notification. If the Host issues a HOST_WAKEUP command and does not receive the ACK it should assume it is not connected or the SDP-5 is not capable of responding on the RS232 and therefore further serial communications will not be possible. If the SDP-5 RS232 is capable of communicating, the SDP-5 will respond to a HOST_WAKEUP Command in any “Powered up” state including standby.

6.5 Getting System Wide Status and Setup:

TBD

6.6 Downloading the System Setup to the SDP-5:

TBD

6.7 Simple System Control & System Status:

The HOST can control the system via the IR commands thus making any direct IR code a direct command. Because of some limitations in the IR codes the HOST also has direct control over the system volume, balance, fader, effect selection, zone 2 volume, balance and input selection through dedicated commands.

6.8 Examples:

The following examples show the byte's transmitted for the SDP-5 Get Unit Configuration, and Send SDP-3 IR, and Send SDP-5 IR Commands . They are shown as they should be transmitted from left to right.

6.8.1 SDP-5 Get Unit Configuration

The HOST initiates by sending the GET_UNIT_CONFIG command packet:

SOP	DLL DC	CMD	AppDC	EOP
F1	03	38	00	F2

If the command is received without error the SDP-5 responds with the UNIT_CONFIG response packet:

SOP	DLL DC	CMD	App DC	DATA0	DATA1	DATA2
				Product Id	SW TYPE	SW LVL
F1	1E	91	19	7	4	00

DATA3	DATA4	DATA5	DATA6	DATA7	DATA8	DATA9
SW MJ REV	SW MN REV	PTCL MJ REV	PTCL MN REV	PARAM COUNT (LSB)	PARAM COUNT (MSB)	EFFECT COUNT
01	00	01	00	38	04	33

DATA10	DATA11	DATA12	DATA13	DATA14	DATA15	DATA16	DATA17
Time Stamp	Time Stamp	Time Stamp	Time Stamp	Time Stamp	Time Stamp	Time Stamp	Time Stamp
30	32	2f	30	32	2f	32	31
0	2	/	1	2	/	3	1

DATA18	DATA19	DATA20	DATA21	DATA22	DATA23	DATA24	DATA25
Time Stamp	Time Stamp	Time Stamp	Time Stamp	Time Stamp	Time Stamp	Time Stamp	Time Stamp
20	31	37	3A	30	35	00	00
(sp)	1	7	:	0	5		

DATA26	DATA27	DATA28	DATA29	EOP
Serial Number (LSB)	Serial Number	Serial Number	Serial Number (MSB)	
68	04	00	00	F2

From the response packet we can see that the SDP-5 is configured as a

Product Id is JBL SDP-5
 Software are type COMPLETE
 Software level of RELEASED
 Software Version 1.00
 Protocol Version 1.00
 with 1080 parameters
 and 51 effects,
 and the software image was built
 "02/12/31 17:05"
 and has an internal serial number of
 1128 (0x00 00 04 68)

6.8.2 Send SDP-5 IR Command Example

SOP	DLL DC	CMD	AppDC	DATA0 IR Key Code	EOP
F1	04	39	01	26	F2

This example shows how to transmit the IR command for “MAIN_CD”. This example command will select the GAME input for the Main Zone. The bytes are transmitted from left to right and they are defined as:

Byte 0: Start of Packet(F1 hex)

Byte 1: Data Link Layer(DLL) Data Count(DC); for an IR command this would be 4 bytes to follow

Byte 2: The Application Layer Command, in this case it is 39 hex indicating this is an IR command packet.

Byte 3: The Application Layer Data Count(DC); for this packet it is 1 data byte to follow.

Byte 4: The Application Command Data: This IR Command Packet is transmitting Key Code “MAIN_GAME”(28 hex). To transmit other IR Key Codes the user would replace this byte with other IR key codes as found in [Appendix D SDP-5 IR Codes](#).

Byte 5: End of Packet (F2 hex)

Appendix L SDP-5 V1.00 Parameter ID List

The following table is for **SDP-5 V1.00 reference only**. These Parameter Id Values will change with S/W and Protocol version changes. The SDP-5 can always be queried for the correct Parameter Id numbers and Parameter Definition Packets.

ParamId ParamPath.ParamName

- 0 None
- 1 PARAM.INPUTS
- 2 PARAM.INPUTS.OFF
- 3 PARAM.INPUTS.OFF.INPNAME
- 4 PARAM.INPUTS.OFF.DIGIN
- 5 PARAM.INPUTS.OFF.ANLGIN
- 6 PARAM.INPUTS.OFF.ANLGTRIM
- 7 PARAM.INPUTS.OFF.TRIMMODE
- 8 PARAM.INPUTS.OFF.VIDEOIN
- 9 PARAM.INPUTS.OFF.CH2EFFCT
- 10 PARAM.INPUTS.OFF.DDEFFCT
- 11 PARAM.INPUTS.OFF.DTSEFFCT
- 12 PARAM.INPUTS.OFF.MSRCMODE
- 13 PARAM.INPUTS.OFF.ZSRCMODE
- 14 PARAM.INPUTS.OFF.ANLGBYPASS
- 15 PARAM.INPUTS.OFF.TRIGGER1
- 16 PARAM.INPUTS.OFF.TRIGGER2
- 17 PARAM.INPUTS.OFF.COMPONENTIN
- 18 PARAM.INPUTS.OFF.SVID_16_9
- 19 PARAM.INPUTS.OFF.SVIDOSD_4_3
- 20 PARAM.INPUTS.OFF.COMPNTOSD
- 21 PARAM.INPUTS.OFF._51_AD_EFFECT
- 22 PARAM.INPUTS.DVD1
- 23 PARAM.INPUTS.DVD1.INPNAME

24 PARAM.INPUTS.DVD1.DIGIN
25 PARAM.INPUTS.DVD1.ANLGIN
26 PARAM.INPUTS.DVD1.ANLGTRIM
27 PARAM.INPUTS.DVD1.TRIMMODE
28 PARAM.INPUTS.DVD1.VIDEOIN
29 PARAM.INPUTS.DVD1.CH2EFFCT
30 PARAM.INPUTS.DVD1.DDEFFCT
31 PARAM.INPUTS.DVD1.DTSEFFCT
32 PARAM.INPUTS.DVD1.MSRCMODE
33 PARAM.INPUTS.DVD1.ZSRCMODE
34 PARAM.INPUTS.DVD1.ANLGBYPASS
35 PARAM.INPUTS.DVD1.TRIGGER1
36 PARAM.INPUTS.DVD1.TRIGGER2
37 PARAM.INPUTS.DVD1.COMPONENTIN
38 PARAM.INPUTS.DVD1.SVID_16_9
39 PARAM.INPUTS.DVD1.SVIDOSD_4_3
40 PARAM.INPUTS.DVD1.COMPNTOSD
41 PARAM.INPUTS.DVD1._51_AD_EFFECT
42 PARAM.INPUTS.DVD2
43 PARAM.INPUTS.DVD2.INPNAME
44 PARAM.INPUTS.DVD2.DIGIN
45 PARAM.INPUTS.DVD2.ANLGIN
46 PARAM.INPUTS.DVD2.ANLGTRIM
47 PARAM.INPUTS.DVD2.TRIMMODE
48 PARAM.INPUTS.DVD2.VIDEOIN
49 PARAM.INPUTS.DVD2.CH2EFFCT
50 PARAM.INPUTS.DVD2.DDEFFCT
51 PARAM.INPUTS.DVD2.DTSEFFCT
52 PARAM.INPUTS.DVD2.MSRCMODE
53 PARAM.INPUTS.DVD2.ZSRCMODE
54 PARAM.INPUTS.DVD2.ANLGBYPASS
55 PARAM.INPUTS.DVD2.TRIGGER1
56 PARAM.INPUTS.DVD2.TRIGGER2
57 PARAM.INPUTS.DVD2.COMPONENTIN
58 PARAM.INPUTS.DVD2.SVID_16_9
59 PARAM.INPUTS.DVD2.SVIDOSD_4_3
60 PARAM.INPUTS.DVD2.COMPNTOSD
61 PARAM.INPUTS.DVD2._51_AD_EFFECT
62 PARAM.INPUTS.CD
63 PARAM.INPUTS.CD.INPNAME
64 PARAM.INPUTS.CD.DIGIN
65 PARAM.INPUTS.CD.ANLGIN
66 PARAM.INPUTS.CD.ANLGTRIM
67 PARAM.INPUTS.CD.TRIMMODE
68 PARAM.INPUTS.CD.VIDEOIN
69 PARAM.INPUTS.CD.CH2EFFCT
70 PARAM.INPUTS.CD.DDEFFCT
71 PARAM.INPUTS.CD.DTSEFFCT
72 PARAM.INPUTS.CD.MSRCMODE
73 PARAM.INPUTS.CD.ZSRCMODE
74 PARAM.INPUTS.CD.ANLGBYPASS
75 PARAM.INPUTS.CD.TRIGGER1

76 PARAM.INPUTS.CD.TRIGGER2
77 PARAM.INPUTS.CD.COMPONENTIN
78 PARAM.INPUTS.CD.SVID_16_9
79 PARAM.INPUTS.CD.SVIDOSD_4_3
80 PARAM.INPUTS.CD.COMPNTOSD
81 PARAM.INPUTS.CD._51_AD_EFFECT
82 PARAM.INPUTS.TUNER
83 PARAM.INPUTS.TUNER.INPNAME
84 PARAM.INPUTS.TUNER.DIGIN
85 PARAM.INPUTS.TUNER.ANLGIN
86 PARAM.INPUTS.TUNER.ANLGTRIM
87 PARAM.INPUTS.TUNER.TRIMMODE
88 PARAM.INPUTS.TUNER.VIDEOIN
89 PARAM.INPUTS.TUNER.CH2EFFCT
90 PARAM.INPUTS.TUNER.DDEFFCT
91 PARAM.INPUTS.TUNER.DTSEFFCT
92 PARAM.INPUTS.TUNER.MSRCMODE
93 PARAM.INPUTS.TUNER.ZSRCMODE
94 PARAM.INPUTS.TUNER.ANLGBYPASS
95 PARAM.INPUTS.TUNER.TRIGGER1
96 PARAM.INPUTS.TUNER.TRIGGER2
97 PARAM.INPUTS.TUNER.COMPONENTIN
98 PARAM.INPUTS.TUNER.SVID_16_9
99 PARAM.INPUTS.TUNER.SVIDOSD_4_3
100 PARAM.INPUTS.TUNER.COMPNTOSD
101 PARAM.INPUTS.TUNER._51_AD_EFFECT
102 PARAM.INPUTS.TV
103 PARAM.INPUTS.TV.INPNAME
104 PARAM.INPUTS.TV.DIGIN
105 PARAM.INPUTS.TV.ANLGIN
106 PARAM.INPUTS.TV.ANLGTRIM
107 PARAM.INPUTS.TV.TRIMMODE
108 PARAM.INPUTS.TV.VIDEOIN
109 PARAM.INPUTS.TV.CH2EFFCT
110 PARAM.INPUTS.TV.DDEFFCT
111 PARAM.INPUTS.TV.DTSEFFCT
112 PARAM.INPUTS.TV.MSRCMODE
113 PARAM.INPUTS.TV.ZSRCMODE
114 PARAM.INPUTS.TV.ANLGBYPASS
115 PARAM.INPUTS.TV.TRIGGER1
116 PARAM.INPUTS.TV.TRIGGER2
117 PARAM.INPUTS.TV.COMPONENTIN
118 PARAM.INPUTS.TV.SVID_16_9
119 PARAM.INPUTS.TV.SVIDOSD_4_3
120 PARAM.INPUTS.TV.COMPNTOSD
121 PARAM.INPUTS.TV._51_AD_EFFECT
122 PARAM.INPUTS.VCR
123 PARAM.INPUTS.VCR.INPNAME
124 PARAM.INPUTS.VCR.DIGIN
125 PARAM.INPUTS.VCR.ANLGIN
126 PARAM.INPUTS.VCR.ANLGTRIM
127 PARAM.INPUTS.VCR.TRIMMODE

128 PARAM.INPUTS.VCR.CH2EFFCT
129 PARAM.INPUTS.VCR.VIDEOIN
130 PARAM.INPUTS.VCR.DDEFFCT
131 PARAM.INPUTS.VCR.DTSEFFCT
132 PARAM.INPUTS.VCR.MSRCMODE
133 PARAM.INPUTS.VCR.ZSRCMODE
134 PARAM.INPUTS.VCR.ANLGBYPASS
135 PARAM.INPUTS.VCR.TRIGGER1
136 PARAM.INPUTS.VCR.TRIGGER2
137 PARAM.INPUTS.VCR.COMPONENTIN
138 PARAM.INPUTS.VCR.SVID_16_9
139 PARAM.INPUTS.VCR.SVIDOSD_4_3
140 PARAM.INPUTS.VCR.COMPNTOSD
141 PARAM.INPUTS.VCR._51_AD_EFFECT
142 PARAM.INPUTS.SAT
143 PARAM.INPUTS.SAT.INPNAME
144 PARAM.INPUTS.SAT.DIGIN
145 PARAM.INPUTS.SAT.ANLGIN
146 PARAM.INPUTS.SAT.ANLGTRIM
147 PARAM.INPUTS.SAT.TRIMMODE
148 PARAM.INPUTS.SAT.VIDEOIN
149 PARAM.INPUTS.SAT.CH2EFFCT
150 PARAM.INPUTS.SAT.DDEFFCT
151 PARAM.INPUTS.SAT.DTSEFFCT
152 PARAM.INPUTS.SAT.MSRCMODE
153 PARAM.INPUTS.SAT.ZSRCMODE
154 PARAM.INPUTS.SAT.ANLGBYPASS
155 PARAM.INPUTS.SAT.TRIGGER1
156 PARAM.INPUTS.SAT.TRIGGER2
157 PARAM.INPUTS.SAT.COMPONENTIN
158 PARAM.INPUTS.SAT.SVID_16_9
159 PARAM.INPUTS.SAT.SVIDOSD_4_3
160 PARAM.INPUTS.SAT.COMPNTOSD
161 PARAM.INPUTS.SAT._51_AD_EFFECT
162 PARAM.INPUTS.AUX
163 PARAM.INPUTS.AUX.INPNAME
164 PARAM.INPUTS.AUX.DIGIN
165 PARAM.INPUTS.AUX.ANLGIN
166 PARAM.INPUTS.AUX.ANLGTRIM
167 PARAM.INPUTS.AUX.TRIMMODE
168 PARAM.INPUTS.AUX.VIDEOIN
169 PARAM.INPUTS.AUX.CH2EFFCT
170 PARAM.INPUTS.AUX.DDEFFCT
171 PARAM.INPUTS.AUX.DTSEFFCT
172 PARAM.INPUTS.AUX.MSRCMODE
173 PARAM.INPUTS.AUX.ZSRCMODE
174 PARAM.INPUTS.AUX.ANLGBYPASS
175 PARAM.INPUTS.AUX.TRIGGER1
176 PARAM.INPUTS.AUX.TRIGGER2
177 PARAM.INPUTS.AUX.COMPONENTIN
178 PARAM.INPUTS.AUX.SVID_16_9
179 PARAM.INPUTS.AUX.SVIDOSD_4_3

180 PARAM.INPUTS.AUX.COMPNTOSD
181 PARAM.INPUTS.AUX._51_AD_EFFECT
182 PARAM.INPUTS.ANLGCONFIG
183 PARAM.INPUTS.LEVELS
184 PARAM.INPUTS.LEVELS.INLEFT
185 PARAM.INPUTS.LEVELS.INRIGHT
186 PARAM.INPUTS.LEVELS.INCENTER
187 PARAM.INPUTS.LEVELS.INLFE
188 PARAM.INPUTS.LEVELS.SIDELEFT
189 PARAM.INPUTS.LEVELS.SIDERIGHT
190 PARAM.INPUTS.LEVELS.REARLEFT
191 PARAM.INPUTS.LEVELS.REARRIGHT
192 PARAM.INPUTS.LEVELS.PEAK
193 PARAM.INPUTS.AUTOTRIM
194 PARAM.MAIN
195 PARAM.MAIN.OUTPUTS
196 RESERVED
197 RESERVED
198 RESERVED
199 RESERVED
200 RESERVED
201 RESERVED
202 RESERVED
203 RESERVED
204 RESERVED
205 RESERVED
206 RESERVED
207 RESERVED
208 RESERVED
209 RESERVED
210 RESERVED
211 RESERVED
212 RESERVED
213 RESERVED
214 RESERVED
215 RESERVED
216 RESERVED
217 RESERVED
218 RESERVED
219 RESERVED
220 RESERVED
221 RESERVED
222 PARAM.MAIN.OUTPUTS.FRONT
223 PARAM.MAIN.OUTPUTS.FRONT.HP_XOVER
224 PARAM.MAIN.OUTPUTS.FRONT.LEFT
225 PARAM.MAIN.OUTPUTS.FRONT.LEFT.DISTANCE
226 PARAM.MAIN.OUTPUTS.FRONT.LEFT.OUTLEVEL
227 PARAM.MAIN.OUTPUTS.FRONT.RIGHT
228 PARAM.MAIN.OUTPUTS.FRONT.RIGHT.DISTANCE
229 PARAM.MAIN.OUTPUTS.FRONT.RIGHT.OUTLEVEL
230 PARAM.MAIN.OUTPUTS.CENTER
231 PARAM.MAIN.OUTPUTS.CENTER.HP_XOVER

232 PARAM.MAIN.OUTPUTS.CENTER.DISTANCE
233 PARAM.MAIN.OUTPUTS.CENTER.OUTLEVEL
234 PARAM.MAIN.OUTPUTS.SIDE
235 PARAM.MAIN.OUTPUTS.SIDE.HP_XOVER
236 PARAM.MAIN.OUTPUTS.SIDE.LEFT
237 PARAM.MAIN.OUTPUTS.SIDE.LEFT.DISTANCE
238 PARAM.MAIN.OUTPUTS.SIDE.LEFT.OUTLEVEL
239 PARAM.MAIN.OUTPUTS.SIDE.RIGHT
240 PARAM.MAIN.OUTPUTS.SIDE.RIGHT.DISTANCE
241 PARAM.MAIN.OUTPUTS.SIDE.RIGHT.OUTLEVEL
242 PARAM.MAIN.OUTPUTS.REAR
243 PARAM.MAIN.OUTPUTS.REAR.HP_XOVER
244 PARAM.MAIN.OUTPUTS.REAR.LEFT
245 PARAM.MAIN.OUTPUTS.REAR.LEFT.DISTANCE
246 PARAM.MAIN.OUTPUTS.REAR.LEFT.OUTLEVEL
247 PARAM.MAIN.OUTPUTS.REAR.RIGHT
248 PARAM.MAIN.OUTPUTS.REAR.RIGHT.DISTANCE
249 PARAM.MAIN.OUTPUTS.REAR.RIGHT.OUTLEVEL
250 PARAM.MAIN.OUTPUTS.SUB
251 PARAM.MAIN.OUTPUTS.SUB.LP_XOVER
252 PARAM.MAIN.OUTPUTS.SUB.LEFT
253 PARAM.MAIN.OUTPUTS.SUB.LEFT.DISTANCE
254 PARAM.MAIN.OUTPUTS.SUB.LEFT.OUTLEVEL
255 PARAM.MAIN.OUTPUTS.SUB.RIGHT
256 PARAM.MAIN.OUTPUTS.SUB.RIGHT.DISTANCE
257 PARAM.MAIN.OUTPUTS.SUB.RIGHT.OUTLEVEL
258 PARAM.MAIN.OUTPUTS.SUB.CONFIG
259 PARAM.MAIN.OUTPUTS.SUB.LIMITEN
260 PARAM.MAIN.OUTPUTS.SUB.LIMITADJ
261 PARAM.MAIN.OUTPUTS.LFE
262 PARAM.MAIN.OUTPUTS.LFE.DISTANCE
263 PARAM.MAIN.OUTPUTS.LFE.OUTLEVEL
264 PARAM.MAIN.OUTPUTS.LFE.LIMITEN
265 PARAM.MAIN.OUTPUTS.LFE.LIMITADJ
266 PARAM.MAIN.OUTPUTS.LFE.PRESENT
267 PARAM.MAIN.OUTPUTS.DISTUNITS
268 PARAM.MAIN.OUTPUTS.SUBNOISE
269 PARAM.MAIN.OUTPUTS.THX_ULTRA2_SUB
270 PARAM.MAIN.OUTPUTS.THX_BGC
271 PARAM.MAIN.OUTPUTS.THX_ASA
272 PARAM.MAIN.DATA_STREAM
273 PARAM.MAIN.DATA_STREAM.SAMPLE_RATE
274 PARAM.MAIN.DATA_STREAM.DATA_TYPE
275 PARAM.MAIN.DATA_STREAM.CHANNELS
276 PARAM.MAIN.INPUT
277 PARAM.MAIN.EFFECT
278 PARAM.MAIN.VOLUME
279 PARAM.MAIN.BALANCE
280 PARAM.MAIN.FADER
281 PARAM.MAIN.PWRONVOL
282 PARAM.MAIN.MUTEBY
283 PARAM.MAIN.BASS

284 PARAM.MAIN.TREBLE
285 PARAM.MAIN.TILT
286 PARAM.MAIN.MUTE
287 PARAM.MAIN.MODE
288 PARAM.MAIN.LOUDNESS
289 PARAM.MAIN.DOLBYDATA
290 PARAM.MAIN.DOLBYDATA.DD_CHAN
291 PARAM.MAIN.DOLBYDATA.ENCODING
292 PARAM.MAIN.DOLBYDATA.REF_OFFSET
293 PARAM.MAIN.DOLBYDATA.DDBITRATE
294 PARAM.MAIN.DOLBYDATA.EXDETECT
295 PARAM.MAIN.DOLBYDATA.ROOMTYPE
296 PARAM.MAIN.DOLBYDATA.CLEV
297 PARAM.MAIN.DOLBYDATA.SLEV
298 PARAM.MAIN.DTSDATA
299 PARAM.MAIN.DTSDATA.DTS_CHAN
300 PARAM.MAIN.DTSDATA.ES_FLAG
301 PARAM.MAIN.DTSDATA.DTSBITRATE
302 PARAM.MAIN.DTSDATA.WORDLEN
303 PARAM.MAIN.DTSDATA.SFREQ
304 PARAM.MAIN.DTSDATA._9624FLAG
305 PARAM.ZONE
306 PARAM.ZONE.DATA_STREAM
307 PARAM.ZONE.DATA_STREAM.SAMPLE_RATE
308 PARAM.ZONE.DATA_STREAM.DATA_TYPE
309 PARAM.ZONE.DATA_STREAM.CHANNELS
310 PARAM.ZONE.INPUT
311 PARAM.ZONE.VOLUME
312 PARAM.ZONE.BALANCE
313 PARAM.ZONE.PWRONVOL
314 PARAM.ZONE.MUTE
315 PARAM.ZONE.TRIGGER1
316 PARAM.ZONE.TRIGGER2
317 PARAM.EFFECTS
318 PARAM.EFFECTS.INT_NOISE
319 PARAM.EFFECTS.INT_NOISE.NAME
320 PARAM.EFFECTS.INT_NOISE.OUTPUTLEVELS
321 PARAM.EFFECTS.INT_NOISE.OUTPUTLEVELS.CNTROUTLEVEL
322 PARAM.EFFECTS.INT_NOISE.OUTPUTLEVELS.SIDEOUTLEVEL
323 PARAM.EFFECTS.INT_NOISE.OUTPUTLEVELS.REAROUTLEVEL
324 PARAM.EFFECTS.INT_NOISE.OUTPUTLEVELS.SUBOUTLEVEL
325 PARAM.EFFECTS.INT_NOISE.OUTPUTLEVELS.LFEOUTLEVEL
326 PARAM.EFFECTS.INT_NOISE.TRIGGER1
327 PARAM.EFFECTS.INT_NOISE.TRIGGER2
328 PARAM.EFFECTS.INT_NOISE.FRONTOUTLEVEL
329 PARAM.EFFECTS.LOGIC7
330 PARAM.EFFECTS.LOGIC7.NAME
331 PARAM.EFFECTS.LOGIC7.OUTPUTLEVELS
332 PARAM.EFFECTS.LOGIC7.OUTPUTLEVELS.CNTROUTLEVEL
333 PARAM.EFFECTS.LOGIC7.OUTPUTLEVELS.SIDEOUTLEVEL
334 PARAM.EFFECTS.LOGIC7.OUTPUTLEVELS.REAROUTLEVEL
335 PARAM.EFFECTS.LOGIC7.OUTPUTLEVELS.SUBOUTLEVEL

336 PARAM.EFFECTS.LOGIC7.OUTPUTLEVELS.LFEOUTLEVEL
337 PARAM.EFFECTS.LOGIC7.AUTOAZIMUTH
338 PARAM.EFFECTS.LOGIC7.VOCALENH
339 PARAM.EFFECTS.LOGIC7.FRONTSTEER
340 PARAM.EFFECTS.LOGIC7.REEQ
341 PARAM.EFFECTS.LOGIC7.SOUNDSTAGE
342 PARAM.EFFECTS.LOGIC7.FIVESPKRENH
343 PARAM.EFFECTS.LOGIC7.BASSENH
344 PARAM.EFFECTS.LOGIC7.SURRROLLOFF
345 PARAM.EFFECTS.LOGIC7.REARDLYOFF
346 PARAM.EFFECTS.LOGIC7.CENTERONOFF
347 PARAM.EFFECTS.LOGIC7.SEVENCHANNEL
348 PARAM.EFFECTS.LOGIC7.MONODETECT_ON
349 PARAM.EFFECTS.LOGIC7.SURRONOFF
350 PARAM.EFFECTS.LOGIC7.TRIGGER1
351 PARAM.EFFECTS.LOGIC7.TRIGGER2
352 PARAM.EFFECTS.LOGIC7.HIFRONT_REARROLLOFF
353 PARAM.EFFECTS.LOGIC7.AUTOBALON
354 PARAM.EFFECTS.TV_LOGIC
355 PARAM.EFFECTS.TV_LOGIC.NAME
356 PARAM.EFFECTS.TV_LOGIC.OUTPUTLEVELS
357 PARAM.EFFECTS.TV_LOGIC.OUTPUTLEVELS.CNTROUTLEVEL
358 PARAM.EFFECTS.TV_LOGIC.OUTPUTLEVELS.SIDEOUTLEVEL
359 PARAM.EFFECTS.TV_LOGIC.OUTPUTLEVELS.REAROUTLEVEL
360 PARAM.EFFECTS.TV_LOGIC.OUTPUTLEVELS.SUBOUTLEVEL
361 PARAM.EFFECTS.TV_LOGIC.OUTPUTLEVELS.LFEOUTLEVEL
362 PARAM.EFFECTS.TV_LOGIC.AUTOAZIMUTH
363 PARAM.EFFECTS.TV_LOGIC.VOCALENH
364 PARAM.EFFECTS.TV_LOGIC.FRONTSTEER
365 PARAM.EFFECTS.TV_LOGIC.REEQ
366 PARAM.EFFECTS.TV_LOGIC.SOUNDSTAGE
367 PARAM.EFFECTS.TV_LOGIC.FIVESPKRENH
368 PARAM.EFFECTS.TV_LOGIC.BASSENH
369 PARAM.EFFECTS.TV_LOGIC.SURRROLLOFF
370 PARAM.EFFECTS.TV_LOGIC.REARDLYOFF
371 PARAM.EFFECTS.TV_LOGIC.CENTERONOFF
372 PARAM.EFFECTS.TV_LOGIC.SEVENCHANNEL
373 PARAM.EFFECTS.TV_LOGIC.MONODETECT_ON
374 PARAM.EFFECTS.TV_LOGIC.SURRONOFF
375 PARAM.EFFECTS.TV_LOGIC.TRIGGER1
376 PARAM.EFFECTS.TV_LOGIC.TRIGGER2
377 PARAM.EFFECTS.TV_LOGIC.HIFRONT_REARROLLOFF
378 PARAM.EFFECTS.TV_LOGIC.AUTOBALON
379 PARAM.EFFECTS.MUSIC_LOGIC
380 PARAM.EFFECTS.MUSIC_LOGIC.NAME
381 PARAM.EFFECTS.MUSIC_LOGIC.OUTPUTLEVELS
382 PARAM.EFFECTS.MUSIC_LOGIC.OUTPUTLEVELS.CNTROUTLEVEL
383 PARAM.EFFECTS.MUSIC_LOGIC.OUTPUTLEVELS.SIDEOUTLEVEL
384 PARAM.EFFECTS.MUSIC_LOGIC.OUTPUTLEVELS.REAROUTLEVEL
385 PARAM.EFFECTS.MUSIC_LOGIC.OUTPUTLEVELS.SUBOUTLEVEL
386 PARAM.EFFECTS.MUSIC_LOGIC.OUTPUTLEVELS.LFEOUTLEVEL
387 PARAM.EFFECTS.MUSIC_LOGIC.AUTOAZIMUTH

388 PARAM.EFFECTS.MUSIC_LOGIC.VOCALENH
389 PARAM.EFFECTS.MUSIC_LOGIC.FRONTSTEER
390 PARAM.EFFECTS.MUSIC_LOGIC.REEQ
391 PARAM.EFFECTS.MUSIC_LOGIC.SOUNDSTAGE
392 PARAM.EFFECTS.MUSIC_LOGIC.FIVESPKRENH
393 PARAM.EFFECTS.MUSIC_LOGIC.BASSENH
394 PARAM.EFFECTS.MUSIC_LOGIC.SURRROLLOFF
395 PARAM.EFFECTS.MUSIC_LOGIC.REARDLYOFF
396 PARAM.EFFECTS.MUSIC_LOGIC.CENTERONOFF
397 PARAM.EFFECTS.MUSIC_LOGIC.SEVENCHANNEL
398 PARAM.EFFECTS.MUSIC_LOGIC.MONODETECT_ON
399 PARAM.EFFECTS.MUSIC_LOGIC.SURRONOFF
400 PARAM.EFFECTS.MUSIC_LOGIC.TRIGGER1
401 PARAM.EFFECTS.MUSIC_LOGIC.TRIGGER2
402 PARAM.EFFECTS.MUSIC_LOGIC.HIFRONT_REARROLLOFF
403 PARAM.EFFECTS.MUSIC_LOGIC.AUTOBALON
404 PARAM.EFFECTS.THX_CINEMA
405 PARAM.EFFECTS.THX_CINEMA.NAME
406 PARAM.EFFECTS.THX_CINEMA.OUTPUTLEVELS
407 PARAM.EFFECTS.THX_CINEMA.OUTPUTLEVELS.CNTROUTLEVEL
408 PARAM.EFFECTS.THX_CINEMA.OUTPUTLEVELS.SIDEOUTLEVEL
409 PARAM.EFFECTS.THX_CINEMA.OUTPUTLEVELS.REAROUTLEVEL
410 PARAM.EFFECTS.THX_CINEMA.OUTPUTLEVELS.SUBOUTLEVEL
411 PARAM.EFFECTS.THX_CINEMA.OUTPUTLEVELS.LFEOUTLEVEL
412 PARAM.EFFECTS.THX_CINEMA.TWO_CH_MUX
413 PARAM.EFFECTS.THX_CINEMA.TWOCHCNTRMIX
414 PARAM.EFFECTS.THX_CINEMA.CENTERDELAY
415 PARAM.EFFECTS.THX_CINEMA.MONOREARON
416 PARAM.EFFECTS.THX_CINEMA.DECORRELATE
417 PARAM.EFFECTS.THX_CINEMA.VOCALENH
418 PARAM.EFFECTS.THX_CINEMA.REEQ
419 PARAM.EFFECTS.THX_CINEMA.SURDLY10_25
420 PARAM.EFFECTS.THX_CINEMA.TIMBRE
421 PARAM.EFFECTS.THX_CINEMA.THXMODEON
422 PARAM.EFFECTS.THX_CINEMA.TRIGGER1
423 PARAM.EFFECTS.THX_CINEMA.TRIGGER2
424 PARAM.EFFECTS.THX_CINEMA.REARTIMBRE
425 PARAM.EFFECTS.PROLOGIC
426 PARAM.EFFECTS.PROLOGIC.NAME
427 PARAM.EFFECTS.PROLOGIC.OUTPUTLEVELS
428 PARAM.EFFECTS.PROLOGIC.OUTPUTLEVELS.CNTROUTLEVEL
429 PARAM.EFFECTS.PROLOGIC.OUTPUTLEVELS.SIDEOUTLEVEL
430 PARAM.EFFECTS.PROLOGIC.OUTPUTLEVELS.REAROUTLEVEL
431 PARAM.EFFECTS.PROLOGIC.OUTPUTLEVELS.SUBOUTLEVEL
432 PARAM.EFFECTS.PROLOGIC.OUTPUTLEVELS.LFEOUTLEVEL
433 PARAM.EFFECTS.PROLOGIC.TWO_CH_MUX
434 PARAM.EFFECTS.PROLOGIC.TWOCHCNTRMIX
435 PARAM.EFFECTS.PROLOGIC.CENTERDELAY
436 PARAM.EFFECTS.PROLOGIC.MONOREARON
437 PARAM.EFFECTS.PROLOGIC.DECORRELATE
438 PARAM.EFFECTS.PROLOGIC.VOCALENH
439 PARAM.EFFECTS.PROLOGIC.REEQ

440 PARAM.EFFECTS.PROLOGIC.SURDLY10_25
441 PARAM.EFFECTS.PROLOGIC.TRIGGER1
442 PARAM.EFFECTS.PROLOGIC.TRIGGER2
443 PARAM.EFFECTS.PROLOGIC2
444 PARAM.EFFECTS.PROLOGIC2.NAME
445 PARAM.EFFECTS.PROLOGIC2.OUTPUTLEVELS
446 PARAM.EFFECTS.PROLOGIC2.OUTPUTLEVELS.CNTROUTLEVEL
447 PARAM.EFFECTS.PROLOGIC2.OUTPUTLEVELS.SIDEOUTLEVEL
448 PARAM.EFFECTS.PROLOGIC2.OUTPUTLEVELS.REAROUTLEVEL
449 PARAM.EFFECTS.PROLOGIC2.OUTPUTLEVELS.SUBOUTLEVEL
450 PARAM.EFFECTS.PROLOGIC2.OUTPUTLEVELS.LFEOUTLEVEL
451 PARAM.EFFECTS.PROLOGIC2.SURDLY10_25
452 PARAM.EFFECTS.PROLOGIC2.TWO_CH_MUX
453 PARAM.EFFECTS.PROLOGIC2.TWOCHCNTRMIX
454 PARAM.EFFECTS.PROLOGIC2.CENTERDELAY
455 PARAM.EFFECTS.PROLOGIC2.MONOREARON
456 PARAM.EFFECTS.PROLOGIC2.DECORRELATE
457 PARAM.EFFECTS.PROLOGIC2.VOCALENH
458 PARAM.EFFECTS.PROLOGIC2.REEQ
459 PARAM.EFFECTS.PROLOGIC2.TRIGGER1
460 PARAM.EFFECTS.PROLOGIC2.TRIGGER2
461 PARAM.EFFECTS.PL2MUSIC
462 PARAM.EFFECTS.PL2MUSIC.NAME
463 PARAM.EFFECTS.PL2MUSIC.OUTPUTLEVELS
464 PARAM.EFFECTS.PL2MUSIC.OUTPUTLEVELS.CNTROUTLEVEL
465 PARAM.EFFECTS.PL2MUSIC.OUTPUTLEVELS.SIDEOUTLEVEL
466 PARAM.EFFECTS.PL2MUSIC.OUTPUTLEVELS.REAROUTLEVEL
467 PARAM.EFFECTS.PL2MUSIC.OUTPUTLEVELS.SUBOUTLEVEL
468 PARAM.EFFECTS.PL2MUSIC.OUTPUTLEVELS.LFEOUTLEVEL
469 PARAM.EFFECTS.PL2MUSIC.SURROUNDDELAY
470 PARAM.EFFECTS.PL2MUSIC.TWO_CH_MUX
471 PARAM.EFFECTS.PL2MUSIC.TWOCHCNTRMIX
472 PARAM.EFFECTS.PL2MUSIC.CENTERDELAY
473 PARAM.EFFECTS.PL2MUSIC.MONOREARON
474 PARAM.EFFECTS.PL2MUSIC.DECORRELATE
475 PARAM.EFFECTS.PL2MUSIC.VOCALENH
476 PARAM.EFFECTS.PL2MUSIC.REEQ
477 PARAM.EFFECTS.PL2MUSIC.PL2PAN
478 PARAM.EFFECTS.PL2MUSIC.CNTRWIDTH
479 PARAM.EFFECTS.PL2MUSIC.DIMENSION
480 PARAM.EFFECTS.PL2MUSIC.TRIGGER1
481 PARAM.EFFECTS.PL2MUSIC.TRIGGER2
482 PARAM.EFFECTS.PARTY
483 PARAM.EFFECTS.PARTY.NAME
484 PARAM.EFFECTS.PARTY.OUTPUTLEVELS
485 PARAM.EFFECTS.PARTY.OUTPUTLEVELS.CNTROUTLEVEL
486 PARAM.EFFECTS.PARTY.OUTPUTLEVELS.SIDEOUTLEVEL
487 PARAM.EFFECTS.PARTY.OUTPUTLEVELS.REAROUTLEVEL
488 PARAM.EFFECTS.PARTY.OUTPUTLEVELS.SUBOUTLEVEL
489 PARAM.EFFECTS.PARTY.OUTPUTLEVELS.LFEOUTLEVEL
490 PARAM.EFFECTS.PARTY.AUTOAZIMUTH
491 PARAM.EFFECTS.PARTY.VOCALENH

492 PARAM.EFFECTS.PARTY.REEQ
493 PARAM.EFFECTS.PARTY.MONOCNTR
494 PARAM.EFFECTS.PARTY.TRIGGER1
495 PARAM.EFFECTS.PARTY.TRIGGER2
496 PARAM.EFFECTS.STEREO
497 PARAM.EFFECTS.STEREO.NAME
498 PARAM.EFFECTS.STEREO.OUTPUTLEVELS
499 PARAM.EFFECTS.STEREO.OUTPUTLEVELS.CNTROUTLEVEL
500 PARAM.EFFECTS.STEREO.OUTPUTLEVELS.SIDEOUTLEVEL
501 PARAM.EFFECTS.STEREO.OUTPUTLEVELS.REAROUTLEVEL
502 PARAM.EFFECTS.STEREO.OUTPUTLEVELS.SUBOUTLEVEL
503 PARAM.EFFECTS.STEREO.OUTPUTLEVELS.LFEOUTLEVEL
504 PARAM.EFFECTS.STEREO.AUTOAZIMUTH
505 PARAM.EFFECTS.STEREO.VOCALENH
506 PARAM.EFFECTS.STEREO.REEQ
507 PARAM.EFFECTS.STEREO.MONOCNTR
508 PARAM.EFFECTS.STEREO.TRIGGER1
509 PARAM.EFFECTS.STEREO.TRIGGER2
510 PARAM.EFFECTS.MONO_LOGIC
511 PARAM.EFFECTS.MONO_LOGIC.NAME
512 PARAM.EFFECTS.MONO_LOGIC.MONOENH
513 PARAM.EFFECTS.MONO_LOGIC.MAINLEVEL
514 PARAM.EFFECTS.MONO_LOGIC.ACADEMY
515 PARAM.EFFECTS.MONO_LOGIC.SURRROLLOFF
516 PARAM.EFFECTS.MONO_LOGIC.EFFECTLEVEL
517 PARAM.EFFECTS.MONO_LOGIC.OUTPUTLEVELS
518 PARAM.EFFECTS.MONO_LOGIC.OUTPUTLEVELS.CNTROUTLEVEL
519 PARAM.EFFECTS.MONO_LOGIC.OUTPUTLEVELS.SIDEOUTLEVEL
520 PARAM.EFFECTS.MONO_LOGIC.OUTPUTLEVELS.REAROUTLEVEL
521 PARAM.EFFECTS.MONO_LOGIC.OUTPUTLEVELS.SUBOUTLEVEL
522 PARAM.EFFECTS.MONO_LOGIC.OUTPUTLEVELS.LFEOUTLEVEL
523 PARAM.EFFECTS.MONO_LOGIC.VOCALENH
524 PARAM.EFFECTS.MONO_LOGIC.REEQ
525 PARAM.EFFECTS.MONO_LOGIC.USEREVERB
526 PARAM.EFFECTS.MONO_LOGIC.TRIGGER1
527 PARAM.EFFECTS.MONO_LOGIC.TRIGGER2
528 PARAM.EFFECTS.MONO
529 PARAM.EFFECTS.MONO.NAME
530 PARAM.EFFECTS.MONO.OUTPUTLEVELS
531 PARAM.EFFECTS.MONO.OUTPUTLEVELS.CNTROUTLEVEL
532 PARAM.EFFECTS.MONO.OUTPUTLEVELS.SIDEOUTLEVEL
533 PARAM.EFFECTS.MONO.OUTPUTLEVELS.REAROUTLEVEL
534 PARAM.EFFECTS.MONO.OUTPUTLEVELS.SUBOUTLEVEL
535 PARAM.EFFECTS.MONO.OUTPUTLEVELS.LFEOUTLEVEL
536 PARAM.EFFECTS.MONO.USEREVERB
537 PARAM.EFFECTS.MONO.FRONTOUTLEVEL
538 PARAM.EFFECTS.MONO.TRIGGER1
539 PARAM.EFFECTS.MONO.TRIGGER2
540 PARAM.EFFECTS.MONO_SURROUND
541 PARAM.EFFECTS.MONO_SURROUND.NAME
542 PARAM.EFFECTS.MONO_SURROUND.OUTPUTLEVELS
543 PARAM.EFFECTS.MONO_SURROUND.OUTPUTLEVELS.CNTROUTLEVEL

544 PARAM.EFFECTS.MONO_SURROUND.OUTPUTLEVELS.SIDEOUTLEVEL
545 PARAM.EFFECTS.MONO_SURROUND.OUTPUTLEVELS.REAROUTLEVEL
546 PARAM.EFFECTS.MONO_SURROUND.OUTPUTLEVELS.SUBOUTLEVEL
547 PARAM.EFFECTS.MONO_SURROUND.OUTPUTLEVELS.LFEOUTLEVEL
548 PARAM.EFFECTS.MONO_SURROUND.USEREVERB
549 PARAM.EFFECTS.MONO_SURROUND.TRIGGER1
550 PARAM.EFFECTS.MONO_SURROUND.TRIGGER2
551 PARAM.EFFECTS._51_LOGIC7
552 PARAM.EFFECTS._51_LOGIC7.NAME
553 PARAM.EFFECTS._51_LOGIC7.OUTPUTLEVELS
554 PARAM.EFFECTS._51_LOGIC7.OUTPUTLEVELS.CNTROUTLEVEL
555 PARAM.EFFECTS._51_LOGIC7.OUTPUTLEVELS.SIDEOUTLEVEL
556 PARAM.EFFECTS._51_LOGIC7.OUTPUTLEVELS.REAROUTLEVEL
557 PARAM.EFFECTS._51_LOGIC7.OUTPUTLEVELS.SUBOUTLEVEL
558 PARAM.EFFECTS._51_LOGIC7.OUTPUTLEVELS.LFEOUTLEVEL
559 PARAM.EFFECTS._51_LOGIC7.VOCALENH
560 PARAM.EFFECTS._51_LOGIC7.FIVESPKRENH
561 PARAM.EFFECTS._51_LOGIC7.BASSENH
562 PARAM.EFFECTS._51_LOGIC7.REEQ
563 PARAM.EFFECTS._51_LOGIC7.REARDLYOFF
564 PARAM.EFFECTS._51_LOGIC7.COMPRESSION
565 PARAM.EFFECTS._51_LOGIC7.LFEMIX
566 PARAM.EFFECTS._51_LOGIC7.TWO_CH_MUX
567 PARAM.EFFECTS._51_LOGIC7.TWOCHCNTRMIX
568 PARAM.EFFECTS._51_LOGIC7.CENTERDELAY
569 PARAM.EFFECTS._51_LOGIC7.SOUNDSTAGE
570 PARAM.EFFECTS._51_LOGIC7.FRONTSTEER
571 PARAM.EFFECTS._51_LOGIC7.SURREX
572 PARAM.EFFECTS._51_LOGIC7.SEVENCHANNEL
573 PARAM.EFFECTS._51_LOGIC7.TRIGGER1
574 PARAM.EFFECTS._51_LOGIC7.TRIGGER2
575 PARAM.EFFECTS._51_LOGIC7.MONOREARON
576 PARAM.EFFECTS._51_MUSIC
577 PARAM.EFFECTS._51_MUSIC.NAME
578 PARAM.EFFECTS._51_MUSIC.OUTPUTLEVELS
579 PARAM.EFFECTS._51_MUSIC.OUTPUTLEVELS.CNTROUTLEVEL
580 PARAM.EFFECTS._51_MUSIC.OUTPUTLEVELS.SIDEOUTLEVEL
581 PARAM.EFFECTS._51_MUSIC.OUTPUTLEVELS.REAROUTLEVEL
582 PARAM.EFFECTS._51_MUSIC.OUTPUTLEVELS.SUBOUTLEVEL
583 PARAM.EFFECTS._51_MUSIC.OUTPUTLEVELS.LFEOUTLEVEL
584 PARAM.EFFECTS._51_MUSIC.VOCALENH
585 PARAM.EFFECTS._51_MUSIC.FIVESPKRENH
586 PARAM.EFFECTS._51_MUSIC.BASSENH
587 PARAM.EFFECTS._51_MUSIC.REEQ
588 PARAM.EFFECTS._51_MUSIC.REARDLYOFF
589 PARAM.EFFECTS._51_MUSIC.COMPRESSION
590 PARAM.EFFECTS._51_MUSIC.LFEMIX
591 PARAM.EFFECTS._51_MUSIC.TWO_CH_MUX
592 PARAM.EFFECTS._51_MUSIC.TWOCHCNTRMIX
593 PARAM.EFFECTS._51_MUSIC.CENTERDELAY
594 PARAM.EFFECTS._51_MUSIC.SOUNDSTAGE
595 PARAM.EFFECTS._51_MUSIC.FRONTSTEER

596 PARAM.EFFECTS._51_MUSIC.SURREX
597 PARAM.EFFECTS._51_MUSIC.SEVENCHANNEL
598 PARAM.EFFECTS._51_MUSIC.TRIGGER1
599 PARAM.EFFECTS._51_MUSIC.TRIGGER2
600 PARAM.EFFECTS._51_MUSIC.MONOREARON
601 PARAM.EFFECTS._51_TV_LOGIC
602 PARAM.EFFECTS._51_TV_LOGIC.NAME
603 PARAM.EFFECTS._51_TV_LOGIC.OUTPUTLEVELS
604 PARAM.EFFECTS._51_TV_LOGIC.OUTPUTLEVELS.CNTROUTLEVEL
605 PARAM.EFFECTS._51_TV_LOGIC.OUTPUTLEVELS.SIDEOUTLEVEL
606 PARAM.EFFECTS._51_TV_LOGIC.OUTPUTLEVELS.REAROUTLEVEL
607 PARAM.EFFECTS._51_TV_LOGIC.OUTPUTLEVELS.SUBOUTLEVEL
608 PARAM.EFFECTS._51_TV_LOGIC.OUTPUTLEVELS.LFEOUTLEVEL
609 PARAM.EFFECTS._51_TV_LOGIC.VOCALENH
610 PARAM.EFFECTS._51_TV_LOGIC.FIVESPKRENH
611 PARAM.EFFECTS._51_TV_LOGIC.BASSENH
612 PARAM.EFFECTS._51_TV_LOGIC.REEQ
613 PARAM.EFFECTS._51_TV_LOGIC.REARDLYOFF
614 PARAM.EFFECTS._51_TV_LOGIC.COMPRESSION
615 PARAM.EFFECTS._51_TV_LOGIC.LFEMIX
616 PARAM.EFFECTS._51_TV_LOGIC.TWO_CH_MUX
617 PARAM.EFFECTS._51_TV_LOGIC.TWOCHCNTRMIX
618 PARAM.EFFECTS._51_TV_LOGIC.CENTERDELAY
619 PARAM.EFFECTS._51_TV_LOGIC.SOUNDSTAGE
620 PARAM.EFFECTS._51_TV_LOGIC.FRONTSTEER
621 PARAM.EFFECTS._51_TV_LOGIC.SURREX
622 PARAM.EFFECTS._51_TV_LOGIC.SEVENCHANNEL
623 PARAM.EFFECTS._51_TV_LOGIC.TRIGGER1
624 PARAM.EFFECTS._51_TV_LOGIC.TRIGGER2
625 PARAM.EFFECTS._51_TV_LOGIC.MONOREARON
626 PARAM.EFFECTS._51_THX
627 PARAM.EFFECTS._51_THX.NAME
628 PARAM.EFFECTS._51_THX.OUTPUTLEVELS
629 PARAM.EFFECTS._51_THX.OUTPUTLEVELS.CNTROUTLEVEL
630 PARAM.EFFECTS._51_THX.OUTPUTLEVELS.SIDEOUTLEVEL
631 PARAM.EFFECTS._51_THX.OUTPUTLEVELS.REAROUTLEVEL
632 PARAM.EFFECTS._51_THX.OUTPUTLEVELS.SUBOUTLEVEL
633 PARAM.EFFECTS._51_THX.OUTPUTLEVELS.LFEOUTLEVEL
634 PARAM.EFFECTS._51_THX.COMPRESSION
635 PARAM.EFFECTS._51_THX.LFEMIX
636 PARAM.EFFECTS._51_THX.TWO_CH_MUX
637 PARAM.EFFECTS._51_THX.TWOCHCNTRMIX
638 PARAM.EFFECTS._51_THX.CENTERDELAY
639 PARAM.EFFECTS._51_THX.MONOREARON
640 PARAM.EFFECTS._51_THX.DECORRELATE
641 PARAM.EFFECTS._51_THX.VOCALENH
642 PARAM.EFFECTS._51_THX.REEQ
643 PARAM.EFFECTS._51_THX.TIMBRE
644 PARAM.EFFECTS._51_THX.SURREX
645 PARAM.EFFECTS._51_THX.THXMODEON
646 PARAM.EFFECTS._51_THX.TRIGGER1
647 PARAM.EFFECTS._51_THX.TRIGGER2

648 PARAM.EFFECTS._51_THX.REARTIMBRE
649 PARAM.EFFECTS.DOLBY_DIGITAL
650 PARAM.EFFECTS.DOLBY_DIGITAL.NAME
651 PARAM.EFFECTS.DOLBY_DIGITAL.OUTPUTLEVELS
652 PARAM.EFFECTS.DOLBY_DIGITAL.OUTPUTLEVELS.CNTROUTLEVEL
653 PARAM.EFFECTS.DOLBY_DIGITAL.OUTPUTLEVELS.SIDEOUTLEVEL
654 PARAM.EFFECTS.DOLBY_DIGITAL.OUTPUTLEVELS.REAROUTLEVEL
655 PARAM.EFFECTS.DOLBY_DIGITAL.OUTPUTLEVELS.SUBOUTLEVEL
656 PARAM.EFFECTS.DOLBY_DIGITAL.OUTPUTLEVELS.LFEOUTLEVEL
657 PARAM.EFFECTS.DOLBY_DIGITAL.COMPRESSION
658 PARAM.EFFECTS.DOLBY_DIGITAL.LFEMIX
659 PARAM.EFFECTS.DOLBY_DIGITAL.TWO_CH_MUX
660 PARAM.EFFECTS.DOLBY_DIGITAL.TWOCHCNTRMIX
661 PARAM.EFFECTS.DOLBY_DIGITAL.CENTERDELAY
662 PARAM.EFFECTS.DOLBY_DIGITAL.DECORRELATE
663 PARAM.EFFECTS.DOLBY_DIGITAL.VOCALENH
664 PARAM.EFFECTS.DOLBY_DIGITAL.REEQ
665 PARAM.EFFECTS.DOLBY_DIGITAL.TRIGGER1
666 PARAM.EFFECTS.DOLBY_DIGITAL.TRIGGER2
667 PARAM.EFFECTS.DOLBY_DIGITAL.MONOREARON
668 PARAM.EFFECTS.DOLBY_DIGITAL.EX
669 PARAM.EFFECTS._51_2CHANNEL
670 PARAM.EFFECTS._51_2CHANNEL.NAME
671 PARAM.EFFECTS._51_2CHANNEL.OUTPUTLEVELS
672 PARAM.EFFECTS._51_2CHANNEL.OUTPUTLEVELS.CNTROUTLEVEL
673 PARAM.EFFECTS._51_2CHANNEL.OUTPUTLEVELS.SIDEOUTLEVEL
674 PARAM.EFFECTS._51_2CHANNEL.OUTPUTLEVELS.REAROUTLEVEL
675 PARAM.EFFECTS._51_2CHANNEL.OUTPUTLEVELS.SUBOUTLEVEL
676 PARAM.EFFECTS._51_2CHANNEL.OUTPUTLEVELS.LFEOUTLEVEL
677 PARAM.EFFECTS._51_2CHANNEL.COMPRESSION
678 PARAM.EFFECTS._51_2CHANNEL.LFEMIX_2CH
679 PARAM.EFFECTS._51_2CHANNEL.TWO_CH_MUX
680 PARAM.EFFECTS._51_2CHANNEL.TWOCHCNTRMIX
681 PARAM.EFFECTS._51_2CHANNEL.CENTERDELAY
682 PARAM.EFFECTS._51_2CHANNEL.DECORRELATE
683 PARAM.EFFECTS._51_2CHANNEL.VOCALENH
684 PARAM.EFFECTS._51_2CHANNEL.REEQ
685 PARAM.EFFECTS._51_2CHANNEL.SURRMIX
686 PARAM.EFFECTS._51_2CHANNEL.MASTERLEVEL
687 PARAM.EFFECTS._51_2CHANNEL.TRIGGER1
688 PARAM.EFFECTS._51_2CHANNEL.TRIGGER2
689 PARAM.EFFECTS._51_2CHANNEL.MONOREARON
690 PARAM.EFFECTS._51_MONO_SURROUND
691 PARAM.EFFECTS._51_MONO_SURROUND.NAME
692 PARAM.EFFECTS._51_MONO_SURROUND.OUTPUTLEVELS
693 PARAM.EFFECTS._51_MONO_SURROUND.OUTPUTLEVELS.CNTROUTLEVEL
694 PARAM.EFFECTS._51_MONO_SURROUND.OUTPUTLEVELS.SIDEOUTLEVEL
695 PARAM.EFFECTS._51_MONO_SURROUND.OUTPUTLEVELS.REAROUTLEVEL
696 PARAM.EFFECTS._51_MONO_SURROUND.OUTPUTLEVELS.SUBOUTLEVEL
697 PARAM.EFFECTS._51_MONO_SURROUND.OUTPUTLEVELS.LFEOUTLEVEL
698 PARAM.EFFECTS._51_MONO_SURROUND.USEREVERB
699 PARAM.EFFECTS._51_MONO_SURROUND.TRIGGER1

700 PARAM.EFFECTS._51_MONO_SURROUND.TRIGGER2
701 PARAM.EFFECTS._51_MONO_LOGIC
702 PARAM.EFFECTS._51_MONO_LOGIC.NAME
703 PARAM.EFFECTS._51_MONO_LOGIC.OUTPUTLEVELS
704 PARAM.EFFECTS._51_MONO_LOGIC.OUTPUTLEVELS.CNTROUTLEVEL
705 PARAM.EFFECTS._51_MONO_LOGIC.OUTPUTLEVELS.SIDEOUTLEVEL
706 PARAM.EFFECTS._51_MONO_LOGIC.OUTPUTLEVELS.REAROUTLEVEL
707 PARAM.EFFECTS._51_MONO_LOGIC.OUTPUTLEVELS.SUBOUTLEVEL
708 PARAM.EFFECTS._51_MONO_LOGIC.OUTPUTLEVELS.LFEOUTLEVEL
709 PARAM.EFFECTS._51_MONO_LOGIC.EFFECTLEVEL
710 PARAM.EFFECTS._51_MONO_LOGIC.ACADEMY
711 PARAM.EFFECTS._51_MONO_LOGIC.SURRROLLOFF
712 PARAM.EFFECTS._51_MONO_LOGIC.USEREVERB
713 PARAM.EFFECTS._51_MONO_LOGIC.TRIGGER1
714 PARAM.EFFECTS._51_MONO_LOGIC.TRIGGER2
715 PARAM.EFFECTS._20_ANALOG_BYPASS
716 PARAM.EFFECTS._20_ANALOG_BYPASS.NAME
717 PARAM.EFFECTS._20_ANALOG_BYPASS.OUTPUTLEVELS
718 PARAM.EFFECTS._20_ANALOG_BYPASS.OUTPUTLEVELS.CNTROUTLEVEL
719 PARAM.EFFECTS._20_ANALOG_BYPASS.OUTPUTLEVELS.SIDEOUTLEVEL
720 PARAM.EFFECTS._20_ANALOG_BYPASS.OUTPUTLEVELS.REAROUTLEVEL
721 PARAM.EFFECTS._20_ANALOG_BYPASS.OUTPUTLEVELS.SUBOUTLEVEL
722 PARAM.EFFECTS._20_ANALOG_BYPASS.OUTPUTLEVELS.LFEOUTLEVEL
723 PARAM.EFFECTS._20_ANALOG_BYPASS.TRIGGER1
724 PARAM.EFFECTS._20_ANALOG_BYPASS.TRIGGER2
725 PARAM.EFFECTS._51_ANALOG_BYPASS
726 PARAM.EFFECTS._51_ANALOG_BYPASS.NAME
727 PARAM.EFFECTS._51_ANALOG_BYPASS.OUTPUTLEVELS
728 PARAM.EFFECTS._51_ANALOG_BYPASS.OUTPUTLEVELS.CNTROUTLEVEL
729 PARAM.EFFECTS._51_ANALOG_BYPASS.OUTPUTLEVELS.SIDEOUTLEVEL
730 PARAM.EFFECTS._51_ANALOG_BYPASS.OUTPUTLEVELS.REAROUTLEVEL
731 PARAM.EFFECTS._51_ANALOG_BYPASS.OUTPUTLEVELS.SUBOUTLEVEL
732 PARAM.EFFECTS._51_ANALOG_BYPASS.OUTPUTLEVELS.LFEOUTLEVEL
733 PARAM.EFFECTS._51_ANALOG_BYPASS.TRIGGER1
734 PARAM.EFFECTS._51_ANALOG_BYPASS.TRIGGER2
735 PARAM.EFFECTS._51_MONO
736 PARAM.EFFECTS._51_MONO.NAME
737 PARAM.EFFECTS._51_MONO.OUTPUTLEVELS
738 PARAM.EFFECTS._51_MONO.OUTPUTLEVELS.CNTROUTLEVEL
739 PARAM.EFFECTS._51_MONO.OUTPUTLEVELS.SIDEOUTLEVEL
740 PARAM.EFFECTS._51_MONO.OUTPUTLEVELS.REAROUTLEVEL
741 PARAM.EFFECTS._51_MONO.OUTPUTLEVELS.SUBOUTLEVEL
742 PARAM.EFFECTS._51_MONO.OUTPUTLEVELS.LFEOUTLEVEL
743 PARAM.EFFECTS._51_MONO.USEREVERB
744 PARAM.EFFECTS._51_MONO.FRONTOUTLEVEL
745 PARAM.EFFECTS._51_MONO.TRIGGER1
746 PARAM.EFFECTS._51_MONO.TRIGGER2
747 PARAM.EFFECTS.DTS
748 PARAM.EFFECTS.DTS.NAME
749 PARAM.EFFECTS.DTS.OUTPUTLEVELS
750 PARAM.EFFECTS.DTS.OUTPUTLEVELS.CNTROUTLEVEL
751 PARAM.EFFECTS.DTS.OUTPUTLEVELS.SIDEOUTLEVEL

752 PARAM.EFFECTS.DTS.OUTPUTLEVELS.REAROUTLEVEL
753 PARAM.EFFECTS.DTS.OUTPUTLEVELS.SUBOUTLEVEL
754 PARAM.EFFECTS.DTS.OUTPUTLEVELS.LFEOUTLEVEL
755 PARAM.EFFECTS.DTS.LFEMIX
756 PARAM.EFFECTS.DTS.TWO_CH_MUX
757 PARAM.EFFECTS.DTS.TWOCHCNTRMIX
758 PARAM.EFFECTS.DTS.CENTERDELAY
759 PARAM.EFFECTS.DTS.MONOREARON
760 PARAM.EFFECTS.DTS.DECORRELATE
761 PARAM.EFFECTS.DTS.VOCALENH
762 PARAM.EFFECTS.DTS.REEQ
763 PARAM.EFFECTS.DTS.TRIGGER1
764 PARAM.EFFECTS.DTS.TRIGGER2
765 PARAM.EFFECTS.DTS.DTS_ES_DETECT
766 PARAM.EFFECTS.DTS_LOGIC7
767 PARAM.EFFECTS.DTS_LOGIC7.NAME
768 PARAM.EFFECTS.DTS_LOGIC7.OUTPUTLEVELS
769 PARAM.EFFECTS.DTS_LOGIC7.OUTPUTLEVELS.CNTROUTLEVEL
770 PARAM.EFFECTS.DTS_LOGIC7.OUTPUTLEVELS.SIDEOUTLEVEL
771 PARAM.EFFECTS.DTS_LOGIC7.OUTPUTLEVELS.REAROUTLEVEL
772 PARAM.EFFECTS.DTS_LOGIC7.OUTPUTLEVELS.SUBOUTLEVEL
773 PARAM.EFFECTS.DTS_LOGIC7.OUTPUTLEVELS.LFEOUTLEVEL
774 PARAM.EFFECTS.DTS_LOGIC7.VOCALENH
775 PARAM.EFFECTS.DTS_LOGIC7.FIVESPKRENH
776 PARAM.EFFECTS.DTS_LOGIC7.BASSENH
777 PARAM.EFFECTS.DTS_LOGIC7.REEQ
778 PARAM.EFFECTS.DTS_LOGIC7.REARDLYOFF
779 PARAM.EFFECTS.DTS_LOGIC7.LFEMIX
780 PARAM.EFFECTS.DTS_LOGIC7.TWO_CH_MUX
781 PARAM.EFFECTS.DTS_LOGIC7.TWOCHCNTRMIX
782 PARAM.EFFECTS.DTS_LOGIC7.CENTERDELAY
783 PARAM.EFFECTS.DTS_LOGIC7.SOUNDSTAGE
784 PARAM.EFFECTS.DTS_LOGIC7.FRONTSTEER
785 PARAM.EFFECTS.DTS_LOGIC7.SURREX
786 PARAM.EFFECTS.DTS_LOGIC7.SEVENCHANNEL
787 PARAM.EFFECTS.DTS_LOGIC7.TRIGGER1
788 PARAM.EFFECTS.DTS_LOGIC7.TRIGGER2
789 PARAM.EFFECTS.DTS_LOGIC7.MONOREARON
790 PARAM.EFFECTS.DTS_LOGIC7.DTS_ES_DETECT
791 PARAM.EFFECTS.DTS_THX
792 PARAM.EFFECTS.DTS_THX.NAME
793 PARAM.EFFECTS.DTS_THX.OUTPUTLEVELS
794 PARAM.EFFECTS.DTS_THX.OUTPUTLEVELS.CNTROUTLEVEL
795 PARAM.EFFECTS.DTS_THX.OUTPUTLEVELS.SIDEOUTLEVEL
796 PARAM.EFFECTS.DTS_THX.OUTPUTLEVELS.REAROUTLEVEL
797 PARAM.EFFECTS.DTS_THX.OUTPUTLEVELS.SUBOUTLEVEL
798 PARAM.EFFECTS.DTS_THX.OUTPUTLEVELS.LFEOUTLEVEL
799 PARAM.EFFECTS.DTS_THX.LFEMIX
800 PARAM.EFFECTS.DTS_THX.TWO_CH_MUX
801 PARAM.EFFECTS.DTS_THX.TWOCHCNTRMIX
802 PARAM.EFFECTS.DTS_THX.CENTERDELAY
803 PARAM.EFFECTS.DTS_THX.MONOREARON

804 PARAM.EFFECTS.DTS_THX.DECORRELATE
805 PARAM.EFFECTS.DTS_THX.VOCALENH
806 PARAM.EFFECTS.DTS_THX.REEQ
807 PARAM.EFFECTS.DTS_THX.TIMBRE
808 PARAM.EFFECTS.DTS_THX.SURREX
809 PARAM.EFFECTS.DTS_THX.THXMODEON
810 PARAM.EFFECTS.DTS_THX.TRIGGER1
811 PARAM.EFFECTS.DTS_THX.TRIGGER2
812 PARAM.EFFECTS.DTS_THX.REARTIMBRE
813 PARAM.EFFECTS.DTS_THX.DTS_ES_DETECT
814 PARAM.EFFECTS.DTS_MUSIC
815 PARAM.EFFECTS.DTS_MUSIC.NAME
816 PARAM.EFFECTS.DTS_MUSIC.OUTPUTLEVELS
817 PARAM.EFFECTS.DTS_MUSIC.OUTPUTLEVELS.CNTROUTLEVEL
818 PARAM.EFFECTS.DTS_MUSIC.OUTPUTLEVELS.SIDEOUTLEVEL
819 PARAM.EFFECTS.DTS_MUSIC.OUTPUTLEVELS.REAROUTLEVEL
820 PARAM.EFFECTS.DTS_MUSIC.OUTPUTLEVELS.SUBOUTLEVEL
821 PARAM.EFFECTS.DTS_MUSIC.OUTPUTLEVELS.LFEOUTLEVEL
822 PARAM.EFFECTS.DTS_MUSIC.VOCALENH
823 PARAM.EFFECTS.DTS_MUSIC.FIVESPKRENH
824 PARAM.EFFECTS.DTS_MUSIC.BASSENH
825 PARAM.EFFECTS.DTS_MUSIC.REEQ
826 PARAM.EFFECTS.DTS_MUSIC.REARDLYOFF
827 PARAM.EFFECTS.DTS_MUSIC.LFEMIX
828 PARAM.EFFECTS.DTS_MUSIC.TWO_CH_MUX
829 PARAM.EFFECTS.DTS_MUSIC.TWOCHCNTRMIX
830 PARAM.EFFECTS.DTS_MUSIC.CENTERDELAY
831 PARAM.EFFECTS.DTS_MUSIC.SOUNDSTAGE
832 PARAM.EFFECTS.DTS_MUSIC.FRONTSTEER
833 PARAM.EFFECTS.DTS_MUSIC.SURREX
834 PARAM.EFFECTS.DTS_MUSIC.SEVENCHANNEL
835 PARAM.EFFECTS.DTS_MUSIC.TRIGGER1
836 PARAM.EFFECTS.DTS_MUSIC.TRIGGER2
837 PARAM.EFFECTS.DTS_MUSIC.MONOREARON
838 PARAM.EFFECTS.DTS_MUSIC.DTS_ES_DETECT
839 PARAM.EFFECTS.DTS_2CHANNEL
840 PARAM.EFFECTS.DTS_2CHANNEL.NAME
841 PARAM.EFFECTS.DTS_2CHANNEL.OUTPUTLEVELS
842 PARAM.EFFECTS.DTS_2CHANNEL.OUTPUTLEVELS.CNTROUTLEVEL
843 PARAM.EFFECTS.DTS_2CHANNEL.OUTPUTLEVELS.SIDEOUTLEVEL
844 PARAM.EFFECTS.DTS_2CHANNEL.OUTPUTLEVELS.REAROUTLEVEL
845 PARAM.EFFECTS.DTS_2CHANNEL.OUTPUTLEVELS.SUBOUTLEVEL
846 PARAM.EFFECTS.DTS_2CHANNEL.OUTPUTLEVELS.LFEOUTLEVEL
847 PARAM.EFFECTS.DTS_2CHANNEL.LFEMIX_2CH
848 PARAM.EFFECTS.DTS_2CHANNEL.TWO_CH_MUX
849 PARAM.EFFECTS.DTS_2CHANNEL.TWOCHCNTRMIX
850 PARAM.EFFECTS.DTS_2CHANNEL.CENTERDELAY
851 PARAM.EFFECTS.DTS_2CHANNEL.MONOREARON
852 PARAM.EFFECTS.DTS_2CHANNEL.DECORRELATE
853 PARAM.EFFECTS.DTS_2CHANNEL.VOCALENH
854 PARAM.EFFECTS.DTS_2CHANNEL.REEQ
855 PARAM.EFFECTS.DTS_2CHANNEL.SURRMIX

856 PARAM.EFFECTS.DTS_2CHANNEL.MASTERLEVEL
857 PARAM.EFFECTS.DTS_2CHANNEL.TRIGGER1
858 PARAM.EFFECTS.DTS_2CHANNEL.TRIGGER2
859 PARAM.EFFECTS.DTS_2CHANNEL.DTS_ES_DETECT
860 PARAM.EFFECTS.DTS_NEO_MUSIC
861 PARAM.EFFECTS.DTS_NEO_MUSIC.NAME
862 PARAM.EFFECTS.DTS_NEO_MUSIC.OUTPUTLEVELS
863 PARAM.EFFECTS.DTS_NEO_MUSIC.OUTPUTLEVELS.CNTROUTLEVEL
864 PARAM.EFFECTS.DTS_NEO_MUSIC.OUTPUTLEVELS.SIDEOUTLEVEL
865 PARAM.EFFECTS.DTS_NEO_MUSIC.OUTPUTLEVELS.REAROUTLEVEL
866 PARAM.EFFECTS.DTS_NEO_MUSIC.OUTPUTLEVELS.SUBOUTLEVEL
867 PARAM.EFFECTS.DTS_NEO_MUSIC.OUTPUTLEVELS.LFEOUTLEVEL
868 PARAM.EFFECTS.DTS_NEO_MUSIC.TRIGGER1
869 PARAM.EFFECTS.DTS_NEO_MUSIC.TRIGGER2
870 PARAM.EFFECTS.DTS_NEO_MUSIC.DECORRELATE
871 PARAM.EFFECTS.DTS_NEO_MUSIC.MONOREARON
872 PARAM.EFFECTS.DTS_NEO_FILM
873 PARAM.EFFECTS.DTS_NEO_FILM.NAME
874 PARAM.EFFECTS.DTS_NEO_FILM.OUTPUTLEVELS
875 PARAM.EFFECTS.DTS_NEO_FILM.OUTPUTLEVELS.CNTROUTLEVEL
876 PARAM.EFFECTS.DTS_NEO_FILM.OUTPUTLEVELS.SIDEOUTLEVEL
877 PARAM.EFFECTS.DTS_NEO_FILM.OUTPUTLEVELS.REAROUTLEVEL
878 PARAM.EFFECTS.DTS_NEO_FILM.OUTPUTLEVELS.SUBOUTLEVEL
879 PARAM.EFFECTS.DTS_NEO_FILM.OUTPUTLEVELS.LFEOUTLEVEL
880 PARAM.EFFECTS.DTS_NEO_FILM.TRIGGER1
881 PARAM.EFFECTS.DTS_NEO_FILM.TRIGGER2
882 PARAM.EFFECTS.DTS_NEO_FILM.DECORRELATE
883 PARAM.EFFECTS.DTS_NEO_FILM.MONOREARON
884 PARAM.EFFECTS._51_THX_MUSIC
885 PARAM.EFFECTS._51_THX_MUSIC.NAME
886 PARAM.EFFECTS._51_THX_MUSIC.OUTPUTLEVELS
887 PARAM.EFFECTS._51_THX_MUSIC.OUTPUTLEVELS.CNTROUTLEVEL
888 PARAM.EFFECTS._51_THX_MUSIC.OUTPUTLEVELS.SIDEOUTLEVEL
889 PARAM.EFFECTS._51_THX_MUSIC.OUTPUTLEVELS.REAROUTLEVEL
890 PARAM.EFFECTS._51_THX_MUSIC.OUTPUTLEVELS.SUBOUTLEVEL
891 PARAM.EFFECTS._51_THX_MUSIC.OUTPUTLEVELS.LFEOUTLEVEL
892 PARAM.EFFECTS._51_THX_MUSIC.COMPRESSION
893 PARAM.EFFECTS._51_THX_MUSIC.LFEMIX
894 PARAM.EFFECTS._51_THX_MUSIC.TWO_CH_MUX
895 PARAM.EFFECTS._51_THX_MUSIC.TWOCHCNTRMIX
896 PARAM.EFFECTS._51_THX_MUSIC.CENTERDELAY
897 PARAM.EFFECTS._51_THX_MUSIC.MONOREARON
898 PARAM.EFFECTS._51_THX_MUSIC.DECORRELATE
899 PARAM.EFFECTS._51_THX_MUSIC.VOCALENH
900 PARAM.EFFECTS._51_THX_MUSIC.REEQ
901 PARAM.EFFECTS._51_THX_MUSIC.TIMBRE
902 PARAM.EFFECTS._51_THX_MUSIC.SURREX
903 PARAM.EFFECTS._51_THX_MUSIC.THXMODEON
904 PARAM.EFFECTS._51_THX_MUSIC.TRIGGER1
905 PARAM.EFFECTS._51_THX_MUSIC.TRIGGER2
906 PARAM.EFFECTS._51_THX_MUSIC.REARTIMBRE
907 PARAM.EFFECTS.DTS_THX_MUSIC

908 PARAM.EFFECTS.DTS_THX_MUSIC.NAME
909 PARAM.EFFECTS.DTS_THX_MUSIC.OUTPUTLEVELS
910 PARAM.EFFECTS.DTS_THX_MUSIC.OUTPUTLEVELS.CNTROUTLEVEL
911 PARAM.EFFECTS.DTS_THX_MUSIC.OUTPUTLEVELS.SIDEOUTLEVEL
912 PARAM.EFFECTS.DTS_THX_MUSIC.OUTPUTLEVELS.REAROUTLEVEL
913 PARAM.EFFECTS.DTS_THX_MUSIC.OUTPUTLEVELS.SUBOUTLEVEL
914 PARAM.EFFECTS.DTS_THX_MUSIC.OUTPUTLEVELS.LFEOUTLEVEL
915 PARAM.EFFECTS.DTS_THX_MUSIC.LFEMIX
916 PARAM.EFFECTS.DTS_THX_MUSIC.TWO_CH_MUX
917 PARAM.EFFECTS.DTS_THX_MUSIC.TWOCHCNTRMIX
918 PARAM.EFFECTS.DTS_THX_MUSIC.CENTERDELAY
919 PARAM.EFFECTS.DTS_THX_MUSIC.MONOREARON
920 PARAM.EFFECTS.DTS_THX_MUSIC.DECORRELATE
921 PARAM.EFFECTS.DTS_THX_MUSIC.VOCALENH
922 PARAM.EFFECTS.DTS_THX_MUSIC.REEQ
923 PARAM.EFFECTS.DTS_THX_MUSIC.TIMBRE
924 PARAM.EFFECTS.DTS_THX_MUSIC.SURREX
925 PARAM.EFFECTS.DTS_THX_MUSIC.THXMODEON
926 PARAM.EFFECTS.DTS_THX_MUSIC.TRIGGER1
927 PARAM.EFFECTS.DTS_THX_MUSIC.TRIGGER2
928 PARAM.EFFECTS.DTS_THX_MUSIC.REARTIMBRE
929 PARAM.EFFECTS.DTS_THX_MUSIC.DTS_ES_DETECT
930 RESERVED
931 RESERVED
932 RESERVED
933 RESERVED
934 RESERVED
935 RESERVED
936 RESERVED
937 RESERVED
938 RESERVED
939 RESERVED
940 PARAM.EFFECTS.NIGHTCLUB
941 PARAM.EFFECTS.NIGHTCLUB.NAME
942 PARAM.EFFECTS.NIGHTCLUB.OUTPUTLEVELS
943 PARAM.EFFECTS.NIGHTCLUB.OUTPUTLEVELS.CNTROUTLEVEL
944 PARAM.EFFECTS.NIGHTCLUB.OUTPUTLEVELS.SIDEOUTLEVEL
945 PARAM.EFFECTS.NIGHTCLUB.OUTPUTLEVELS.REAROUTLEVEL
946 PARAM.EFFECTS.NIGHTCLUB.OUTPUTLEVELS.SUBOUTLEVEL
947 PARAM.EFFECTS.NIGHTCLUB.OUTPUTLEVELS.LFEOUTLEVEL
948 PARAM.EFFECTS.NIGHTCLUB.TRIGGER1
949 PARAM.EFFECTS.NIGHTCLUB.TRIGGER2
950 PARAM.EFFECTS.NIGHTCLUB.EFFECTLEVEL
951 PARAM.EFFECTS.NIGHTCLUB.SURRROLLOFF
952 PARAM.EFFECTS.NIGHTCLUB.SIZE
953 PARAM.EFFECTS.NIGHTCLUB.PREDELAY
954 PARAM.EFFECTS.NIGHTCLUB.MIDRT
955 PARAM.EFFECTS.NIGHTCLUB.SPEECHDETECT
956 PARAM.EFFECTS.NIGHTCLUB.CENTERDRYLEVEL
957 PARAM.EFFECTS.CONCERT_HALL
958 PARAM.EFFECTS.CONCERT_HALL.NAME
959 PARAM.EFFECTS.CONCERT_HALL.OUTPUTLEVELS

960 PARAM.EFFECTS.CONCERT_HALL.OUTPUTLEVELS.CNTROUTLEVEL
961 PARAM.EFFECTS.CONCERT_HALL.OUTPUTLEVELS.SIDEOUTLEVEL
962 PARAM.EFFECTS.CONCERT_HALL.OUTPUTLEVELS.REAROUTLEVEL
963 PARAM.EFFECTS.CONCERT_HALL.OUTPUTLEVELS.SUBOUTLEVEL
964 PARAM.EFFECTS.CONCERT_HALL.OUTPUTLEVELS.LFEOUTLEVEL
965 PARAM.EFFECTS.CONCERT_HALL.TRIGGER1
966 PARAM.EFFECTS.CONCERT_HALL.TRIGGER2
967 PARAM.EFFECTS.CONCERT_HALL.EFFECTLEVEL
968 PARAM.EFFECTS.CONCERT_HALL.SURRROLLOFF
969 PARAM.EFFECTS.CONCERT_HALL.SIZE
970 PARAM.EFFECTS.CONCERT_HALL.PREDELAY
971 PARAM.EFFECTS.CONCERT_HALL.MIDRT
972 PARAM.EFFECTS.CONCERT_HALL.SPEECHDETECT
973 PARAM.EFFECTS.CONCERT_HALL.CENTERDRYLEVEL
974 PARAM.EFFECTS.CHURCH
975 PARAM.EFFECTS.CHURCH.NAME
976 PARAM.EFFECTS.CHURCH.OUTPUTLEVELS
977 PARAM.EFFECTS.CHURCH.OUTPUTLEVELS.CNTROUTLEVEL
978 PARAM.EFFECTS.CHURCH.OUTPUTLEVELS.SIDEOUTLEVEL
979 PARAM.EFFECTS.CHURCH.OUTPUTLEVELS.REAROUTLEVEL
980 PARAM.EFFECTS.CHURCH.OUTPUTLEVELS.SUBOUTLEVEL
981 PARAM.EFFECTS.CHURCH.OUTPUTLEVELS.LFEOUTLEVEL
982 PARAM.EFFECTS.CHURCH.TRIGGER1
983 PARAM.EFFECTS.CHURCH.TRIGGER2
984 PARAM.EFFECTS.CHURCH.EFFECTLEVEL
985 PARAM.EFFECTS.CHURCH.SURRROLLOFF
986 PARAM.EFFECTS.CHURCH.SIZE2
987 PARAM.EFFECTS.CHURCH.PREDELAY
988 PARAM.EFFECTS.CHURCH.MIDRT
989 PARAM.EFFECTS.CHURCH.SPEECHDETECT
990 PARAM.EFFECTS.CHURCH.MONOLOGICFRONTEND
991 PARAM.EFFECTS.CHURCH.STEREOORB
992 PARAM.EFFECTS.CHURCH.BASSRT
993 PARAM.EFFECTS.CHURCH.CENTERDRYLEVEL
994 PARAM.EFFECTS.CATHEDRAL
995 PARAM.EFFECTS.CATHEDRAL.NAME
996 PARAM.EFFECTS.CATHEDRAL.OUTPUTLEVELS
997 PARAM.EFFECTS.CATHEDRAL.OUTPUTLEVELS.CNTROUTLEVEL
998 PARAM.EFFECTS.CATHEDRAL.OUTPUTLEVELS.SIDEOUTLEVEL
999 PARAM.EFFECTS.CATHEDRAL.OUTPUTLEVELS.REAROUTLEVEL
1000 PARAM.EFFECTS.CATHEDRAL.OUTPUTLEVELS.SUBOUTLEVEL
1001 PARAM.EFFECTS.CATHEDRAL.OUTPUTLEVELS.LFEOUTLEVEL
1002 PARAM.EFFECTS.CATHEDRAL.TRIGGER1
1003 PARAM.EFFECTS.CATHEDRAL.TRIGGER2
1004 PARAM.EFFECTS.CATHEDRAL.EFFECTLEVEL
1005 PARAM.EFFECTS.CATHEDRAL.SURRROLLOFF
1006 PARAM.EFFECTS.CATHEDRAL.SIZE2
1007 PARAM.EFFECTS.CATHEDRAL.PREDELAY
1008 PARAM.EFFECTS.CATHEDRAL.MIDRT
1009 PARAM.EFFECTS.CATHEDRAL.SPEECHDETECT
1010 PARAM.EFFECTS.CATHEDRAL.MONOLOGICFRONTEND
1011 PARAM.EFFECTS.CATHEDRAL.STEREOORB

1012 PARAM.EFFECTS.CATHEDRAL.BASSRT
1013 PARAM.EFFECTS.CATHEDRAL.CENTERDRYLEVEL
1014 PARAM.EFFECTS.MUSIC_SURR
1015 PARAM.EFFECTS.MUSIC_SURR.NAME
1016 PARAM.EFFECTS.MUSIC_SURR.OUTPUTLEVELS
1017 PARAM.EFFECTS.MUSIC_SURR.OUTPUTLEVELS.CNTROUTLEVEL
1018 PARAM.EFFECTS.MUSIC_SURR.OUTPUTLEVELS.SIDEOUTLEVEL
1019 PARAM.EFFECTS.MUSIC_SURR.OUTPUTLEVELS.REAROUTLEVEL
1020 PARAM.EFFECTS.MUSIC_SURR.OUTPUTLEVELS.SUBOUTLEVEL
1021 PARAM.EFFECTS.MUSIC_SURR.OUTPUTLEVELS.LFEOUTLEVEL
1022 PARAM.EFFECTS.MUSIC_SURR.AUTOAZIMUTH
1023 PARAM.EFFECTS.MUSIC_SURR.VOCALENH
1024 PARAM.EFFECTS.MUSIC_SURR.FRONTSTEER
1025 PARAM.EFFECTS.MUSIC_SURR.REEQ
1026 PARAM.EFFECTS.MUSIC_SURR.SOUNDSTAGE
1027 PARAM.EFFECTS.MUSIC_SURR.FIVESPKRENH
1028 PARAM.EFFECTS.MUSIC_SURR.BASSENH
1029 PARAM.EFFECTS.MUSIC_SURR.SURRROLLOFF
1030 PARAM.EFFECTS.MUSIC_SURR.REARDLYOFF
1031 PARAM.EFFECTS.MUSIC_SURR.CENTERONOFF
1032 PARAM.EFFECTS.MUSIC_SURR.SEVENCHANNEL
1033 PARAM.EFFECTS.MUSIC_SURR.MONODETECT_ON
1034 PARAM.EFFECTS.MUSIC_SURR.SURRONOFF
1035 PARAM.EFFECTS.MUSIC_SURR.TRIGGER1
1036 PARAM.EFFECTS.MUSIC_SURR.TRIGGER2
1037 PARAM.EFFECTS.MUSIC_SURR.HIFRONT_REARROLLOFF
1038 PARAM.EFFECTS.MUSIC_SURR.AUTOBALON
1039 PARAM.EFFECTS.PANORAMA
1040 PARAM.EFFECTS.PANORAMA.NAME
1041 PARAM.EFFECTS.PANORAMA.PANINPUTBAL
1042 PARAM.EFFECTS.PANORAMA.EFFECTLEVEL
1043 PARAM.EFFECTS.PANORAMA.SURRROLLOFF
1044 PARAM.EFFECTS.PANORAMA.OUTPUTLEVELS
1045 PARAM.EFFECTS.PANORAMA.OUTPUTLEVELS.CNTROUTLEVEL
1046 PARAM.EFFECTS.PANORAMA.OUTPUTLEVELS.SIDEOUTLEVEL
1047 PARAM.EFFECTS.PANORAMA.OUTPUTLEVELS.REAROUTLEVEL
1048 PARAM.EFFECTS.PANORAMA.OUTPUTLEVELS.SUBOUTLEVEL
1049 PARAM.EFFECTS.PANORAMA.OUTPUTLEVELS.LFEOUTLEVEL
1050 PARAM.EFFECTS.PANORAMA.BASSWIDTH
1051 PARAM.EFFECTS.PANORAMA.TRIGGER1
1052 PARAM.EFFECTS.PANORAMA.TRIGGER2
1053 PARAM.EFFECTS.PANORAMA.REARDLYOFF
1054 PARAM.EFFECTS.PANORAMA.BASSCONTENT
1055 PARAM.EFFECTS.PANORAMA.SPEAKERANGLE
1056 PARAM.EFFECTS.PANORAMA.FINETIMEALIGN
1057 PARAM.EFFECTS.PANORAMA.CALSOURCE
1058 PARAM.EFFECTS.PANORAMA.CALIBRATEACTIVE
1059 PARAM.OSD
1060 PARAM.OSD.STATUS
1061 PARAM.OSD.POSITION
1062 PARAM.OSD.FORMAT
1063 PARAM.OSD.BACKGND

1064 PARAM.OSD.COMPONENTON
1065 PARAM.OSD.SHOWREMOTE
1066 PARAM.FPD
1067 PARAM.FPD.STATUS
1068 PARAM.FPD.BRIGHT
1069 PARAM.LOCKS
1070 PARAM.LOCKS.FXLOCK
1071 PARAM.LOCKS.AUDIOLCK
1072 PARAM.LOCKS.SETUPLCK
1073 PARAM.STANDBY
1074 PARAM.CNAME
1075 PARAM.CNAMEEN
1076 PARAM.AVSYNC
1077 PARAM.PRESETEN
1078 PARAM.TRIGGER1MODE
1079 PARAM.TRIGGER2MODE
1080 PARAM.USERMESSAGE
1081 PARAM.COM
1082 PARAM.COM.CONFIGREG0
1083 PARAM.TMPKEY
1084 PARAM.ERRORS
1085 PARAM.ERRORS.ERROR1
1086 PARAM.ERRORS.ERROR2
1087 PARAM.LANGUAGE